U.S. Department of Labor

Office of Administrative Law Judges
50 Fremont Street
Suite 2100
San Francisco, CA 94105

(415) 744-6577
(415) 744-6569 (FAX)

* *

IN THE MATTER OF: *

*

Robert R. Pierce *
Claimant * Dated: November 7, 2000
*

Against * Case Nos.: 1999-LHC-0391
* 1999-LHC-0392

Diablo Service Corp. *
Employer * OWCP Nos.: 13-95367
* 13-95605

and *
*

Constitution State Service Co. *
Carrier *
*

and *
*
*

Director, Office of Workers' *
Compensation Programs, United *
States Department of Labor *
Party-in-Interest *

****

APPEARANCES:

Steven M. Birnbaum, Esq.
For the Claimant

Judith A. Leichtman, Esq.
For the Employer/Carrier

BEFORE: ELLIN M. O'SHEA
Administrative Law Judge

DECISION AND ORDER - DENIAL/AWARD OF BENEFITS

This is a claim for worker's compensation benefits under the Longshore and Harbor Workers' Compensation Act, as amended (33 U.S.C. §901, et seq.), herein referred to as the "Act."

Hearing History and Record

The hearings were held on June 15, 16 and 30, 1999 in San Francisco, California, at which time all parties were given the opportunity to present evidence and oral arguments, with post trial depositions ruled appropriate due to the manner in which the Bunker Fuel MSDS RX 49 came to light during Ms. Kelsey's June 16, 1999 testimony, after the medical experts' earlier testimony.

The parties presented the following live testimony in June 1999: Claimant (TR 47-109); Leslie Frey (TR 110-121); Dr. Duhan (TR 122-194); Frank Leonis (TR 195-211); for Employer Dr. Cayton (TR 219-278); Gidget Kelsey (TR 279-326); James Stark, M.D. (TR 336-414), followed by the Claimant's recalling of Dr. Duhan. (TR 415-437). The following references will be used: TR for the official June 1999 hearing transcript, CX for a Claimant's exhibits, and RX or EX for an exhibit offered by the Employer/Carrier ("Respondents"). At Tr. 5-6 the ALJ incorporated identified documents which reflect pre-hearing activities in this matter, including the Director's Notice/Position Statement, ALJ's Order to Compel claimant on respondents' motion, and ALJ's February 9, 1999 Trial Notice and PreTrial Order.

Post-hearing the parties filed the August 2, 1999 cross examination deposition testimony of H. Adam Duhan, M.D, (marked here as DTX), and the January 13, 2000 transcript of the direct examination of Revels M. Cayton, M.D, and his January 26, 2000 cross-examination. Both of Dr. Cayton's depositions are marked here CTX: pages 1-18 direct, pages 19-81 cross[1]. On June 1, 2000, DTX was filed with our Docket Clerk. The record closed on July 10, 2000 with the receipt of the parties' Post Trial Briefs.

The documentary record before this Court as constituted at trial's close consists of CX 1-8, CX 10. CX 10 is Dr. Duhan's CV admitted 6/15/99 over employer's objections although not timely exchanged under the ALJ's Pre-Trial Order. CX 8 consists of the five pages of the **Harrison** text and the *Farrow*, *Chu* and *Nisse* articles referred to by Dr. Duhan during his 6/30/99 testimony. TR 444-448, filed by claimant's 7/13/99 letter.[2] See also ALJ's 8/2/99 advice/identification as to what was received in CX 8 at DTX 20-23.

Respondent's documentary evidence consists of Exhibits RX 1-RX 51; RXs 1-48 were admitted 6/15/99, RXs 50-51 were admitted 6/30/99. RX 49 was admitted on 6/16/99, 6/30/99. RX 49 is the 1/31/90 Material Safety Data Sheet ("MSDS") for the "Bunker" fuel oil [3] referred to in Ms. Kelsey's 6/16/99 testimony, the subject of claimant's contentions as to employer's failure to provide and disclose it in response to his discovery request. It is the basis for his granted request the record be reopened and Dr. Duhan recalled. See TR 305-317, 321-23, 326-328. As reflected below and in the record, the presence of the bunker fuel oil Ms. Kelsey testified to, the bunker fuel oil of the RX 49 MSDS, until that

---

[1] This marking is in accord with Claimant's Post Trial Brief's identification of these three post trial depositions taken in accord with counsels' 6/1999 agreements. This marking corresponds to their identification by Employer as "DTR1," "DTR2," and "DRT3," respectively at Respondent's Post Trial Brief pg.2

[2] Dr. Duhan's CV admitted and marked as CX 8 6/15/99 has been renumbered CX 10. For clarity in the record so the 6/30/99 text/articles used by Dr. Duhan during the course of his testimony that day, agreed to at Tr.444-449 and as submitted by claimant's 7/13/99 transmittal letter, are in agreement with the Exhibit Number claimant used 7/13/99. As is the CX 9 numbering for the *Delzell* abstract attached to CTX of 1/26,2000, admission taken under advisement at Dr. Cayton's recalled cross examination testimony but attached and identified for appeal purposes.

[3] When the term "Bunker Fuel" or "Bunker Oil" is used in this decision it refers to all the stated contents of the MSDS RX 49 and by the use of the term "Bunker Fuel Oil," "Bunker Fuel," "Bunker Oil," "bunker fuel oil" and "bunker fuel" all of this MSDS's stated and reflected Trade names: "Bunker Fuel, Low Sulfur Fuel Oil, High Sulfur Fuel Oil"are thereby included in each of these references when used.

6/16/99 point, was not known to be present in the petroleum coke transported/processed through the DSC work site, the subject of the occupational exposure claim at issue. The presence of the RX 49 Bunker Fuel was unknown to both medical experts, Dr. Duhan and Dr. Cayton, whose testimony had concluded before Ms. Kelsey's presentation.

The 6/30/99 ruling to permit the requested recall of Dr. Duhan produced Claimant's Brief on Evidence and Respondents' Opposition to Rebuttal Testimony from Dr. Duhan, both documents incorporated into this record, and discussed by both counsel at the 6/30/99 proceeding, at Tr. 398-415, prior to Dr. Duhan's presentation. The subsequent post hearing medical depositions agreed to in connection with Dr. Duhan's recall and the l/30/90 MSDS RX 49 turn-of-events followed.resulted. The depositions identified and admitted above, at which this ALJ participated telephonically.

Also attached to this record is the abstract of the article by Honda Y. Delzell, identified at CTX 64-71, marked CX 9, in the circumstances reflected.

Nature of Claims at Issue

There are two (2) formal claims before me at this time. One is a hearing loss claim.

The second is the two pronged claim of OWCP Case No. 13-95605. As filed 6/6/96 at EX 6, this two pronged claim is based on Claimant's alleged right hip injury due to stress and strain on the job, and for circulatory problems due to prolonged exposure to petroleum products. His date of injury as to both is his 6/25/91 last day of Longshore Act work, prior to his retirement that month.

In Claimant's Pre Hearing Statement his hip injury contentions were not set forth. But stipulation preliminaries and opening statement indicated his right hip injury claim was a cumulative trauma osteoarthritis claim with a contention his last nine days of work as a Caterpillar bulldozer operator with Diablo Service Corporation, his going on and off the bulldozer these days, aggravated, hastened and accelerated his osteoarthritic hip condition resulting in 12/94 replacement surgery.[4]

The occupational exposure portion of this claim was indicated in Pre Hearing Statement to be a Myelodysplastic Syndrome ("MDS") condition, elsewhere reflected as a blood disorder,[5] resulting from years of exposure to toxics at work including aerosolized petroleum coke, cement powder and bulk grain. In hearing preliminaries, claimant contended it was exposure to the coke dust and coke fumes of petroleum coke at DSC during his last nine days of employment ending 6/25/91, as well as prior petroleum coke Longshore Act exposures almost entirely at DSC, which either hastened or accelerated or actually caused his MDS. As to both these claims the parties stipulate and I so find (TR 9-10):

Stipulations and Issues

With reference to Claimant's claim for benefits for his binaural hearing loss, OWCP No. 13-95367,

---

[4] Claimant's post trial brief, pg. 4, describes these work circumstances causing harm as: his "described ... actions that he makes physically with the Caterpillar in driving it, climbing on it and doing whatever he has to do with it."Pg 4.

[5] A disorder of the bone marrow which results in the lessening of production of white and red blood cells. Approximately 3000 new cases are expected each year in the United States; 1 to 10 per 100,000 people are diagnosed with MDS in Western developed countries. **Harrison** Text. 1998 CX8:2

Case No. 1999-LHC-0391, the parties have stipulated, and the record reflects the following (TR 7-10):

1. An employment relationship existed between Claimant and Employer at the time of the cumulative injury ending June 25, 1991.

2. The claim falls under the coverage of the Longshore Act.

3. Employer was self-insured for liability under the Act at the time of the cumulative injury ending June 25, 1991.

4. Timely notice of the claim was provided to the Employer.

5. The claim was timely filed, on 3/8/96 by EX 6.

6. The claim was timely controverted.

7. Claimant had an average weekly wage of $1,138.40 at the time of the alleged injury.

8. The applicable compensation rate is $682.14 (maximum).

9. An injury to Claimant's auditory system occurred as the result of noise exposure during Claimant's employment as a longshoreman.

10. Diablo Service Corporation (hereinafter "DSC" or "Employer") was the last responsible employer for Claimant's hearing loss claim.

11. Claimant sustained no temporary disability as the result of injury to his auditory system.

12. Claimant sustained permanent disability in the amount of 2.5% binaural hearing loss, entitling him to 5 weeks of permanent partial disability indemnity under the Act.

13. Claimant is entitled to reasonable medical care necessary to cure or relieve him from the effects of his hearing loss.

With reference to OWCP No. 13-95605, 1991 LHCA 392, the claim for benefits for Claimant's alleged right hip and circulatory problems, the parties stipulate and I so find (TR 9-10):

1. The Act applies to this proceeding.

2. The Claimant and the Employer were in an employee-employer relationship at the relevant times and until June 25, 1991.

3. Employer was self-insured for liability under the Act at the time of the alleged cumulative trauma ending June 25, 1991.

4. The claim, filed 6/6/96 by EX 6, was timely controverted.

5. The Claimant is not claiming temporary disability as the result of his alleged injury to his circulatory system.

6. The Claimant is not claiming permanent total disability as the result of his alleged injury to his right hip.

8. The Claimant is not claiming permanent total disability as the result of his alleged injury to his circulatory system.

At hearing a permanent partial disability due to both or each of these unscheduled injuries was claimed from June 25, l991 onward, $639.60 a week, based on his remaining $188.60 earnings capacity in the business operations he has performed since the 1950s while longshoring. ($1,138.40 minus a $959 wage loss.) In claimant's Post Trial Brief, page 3, as to the circulatory injury he claims disability only as of the MDS diagnosis and blood transfusions which occurrred after his 12/94 hip replacement surgery.

The unresolved issues in this proceeding on the OWCP 13-95605 claims are:

1. Whether Claimant's alleged right hip problems arose out of and/or occurred in the course of his maritime employment.

2. Whether Claimant's alleged injury to his circulatory system arose out of and/or in the course of his maritime employment.

3. If so, the nature and extent of his disability.

4. § 8(f)

5. Claimant's average weekly wage.

6. Last Responsible Employer.

7. Claimant's entitlement to an award of medical benefits for his alleged problems to his right hip and circulatory system.

8. Claimant's entitlement to an award of interest on any past due compensation benefits, as well as his attorney's entitlement to a fee, as well as reimbursement of litigation expenses for the successful prosecution of the claims.

Applicable Law on Injury, Causation Issues and Responsible Employer

The Act provides a presumption that a claim comes within its provisions. **See** 33 U.S.C. §920(a). This Section 20 presumption "applies as much to the nexus between an employee's malady and his employment activities as it does to any other aspect of a claim." **Swinton v. J. Frank Kelly, Inc.**, 554 F.2d 1075 (D.C. Cir. 1976), **cert. denied**, 429 U.S. 820 (1976).

To establish a **prima facie** claim for compensation, a claimant need not affirmatively establish a connection between work and harm. Rather, a claimant has the burden of establishing only that (1) the claimant sustained physical harm or pain and (2) an accident occurred in the course of employment, or conditions existed at work, which could have caused the harm or pain. **Kelaita**, **v. Director, OWCP,** 799 F. 2d 1309 (9th Cir. 1986); **Kier v. Bethlehem Steel Corp.**, 16 BRBS 128 (1984). Once this **prima facie** case is established, a presumption is created under Section 20(a) that the employee's injury or death arose out of employment. Once claimant establishes a physical harm and working conditions which could have caused or aggravated the harm or pain, the burden shifts to the employer to present

substantial evidence claimant's condition was not caused or aggravated by his employment. **Brown v. Pacific Dry Dock**, 22 BRBS 284 (1989); **Rajotte v. General Dynamics Corp.**, 18 BRBS 85 (1986). To rebut the presumption, the party opposing entitlement must present substantial evidence proving the absence of or severing the connection between such harm and employment or working conditions. **Kier**, **supra.**. The statutory §20(a) presumption may be overcome by evidence specific and comprehensive enough to sever the potential connection between the disability and the work environment. **Parsons Corp. of California v. Director, OWCP**, 619 F.2d 38 (9th Cir. 1980).

If claimant's employment aggravates a non-work-related, underlying disease so as to produce incapacitating symptoms, the resulting disability is compensable. **See Rajotte supra.** If employer presents "specific and comprehensive" evidence sufficient to sever the connection between claimant's harm and his employment, the presumption no longer controls, and the issue of causation must be resolved on the whole body of proof. **See**, **e.g.**, **Leone v. Sealand Terminal Corp.**, 19 BRBS 100 (1986).

Moreover, the employment-related injury need not be the sole cause, or primary factor, in a disability for compensation purposes. Rather, if an employment-related injury contributes to, combines with or aggravates a pre-existing disease or underlying condition, the entire resultant disability is compensable. **Strachan Shipping v. Nash**, 782 F.2d 513 (5th Cir. 1986). **Rajotte.** Also, when claimant sustains an injury at work which is followed by the occurrence of a subsequent injury or aggravation outside work, employer is liable for the entire disability if that subsequent injury is the natural and unavoidable consequence or result of the initial work injury. **Bludworth Shipyard, Inc. v. Lira**, 700 F.2d 1046 (5th Cir. 1983). The term injury includes the aggravation of a pre-existing non-work-related condition or the combination of work- and non-work-related conditions. **Lopez v. Southern Stevedores**, 23 BRBS 295 (1990).

Whether a Claimant's disability is casually related to, and is the natural and unavoidable consequence of his occupational diseases or injury, or whether a subsequent event constituted an independent and intervening event attributable to a Claimant's subsequent actions, thus breaking the chain of causality between the occupational diseases and any disability he may now be experiencing is set out in **Cyr v. Crescent Wharf & Warehouse**, 211 F.2d 454, 457 (9th Cir. 1954).

If the §20 (a) presumption is rebutted, it no longer controls and the record as a whole must be evaluated to determine the issue of causation. **Del Vecchio v. Bowers**, 296 U.S. 280 (1935); **Volpe v. Northeast Marine Terminals**, 671 F.2d 697 (2d Cir. 1981). Once rebutted, the presumption itself passes completely out of the case and the issue of causation is determined by examining the record "as a whole". **Holmes v. Universal Maritime Services Corp.**, 29 BRBS 18 (1995). Prior to 1994, the "true doubt" rule governed the resolution of all evidentiary disputes under the Act; where the evidence was in equipoise, all factual determinations were resolved in favor of the injured employee. **Young & Co. v. Shea**, 397 F.2d 185, 188 (5th Cir. 1968), **cert. denied,** 395 U.S. 920, 89 S. Ct. 1771 (1969). The Supreme Court held in 1994 that the "true doubt" rule violated the Administrative Procedure Act, the general statute governing all administrative bodies. **Director, OWCP v. Greenwich Collieries**, 512 U.S. 267, 114 S. Ct. 2251, 28 BRBS 43 (CRT) (1994). Accordingly, after **Greenwich Collieries** the employee bears the burden of proving causation by a preponderance of the evidence after the presumption is rebutted.

The Employer as a self-insurer is subject to responsibility for payment of benefits under the rule stated in **Travelers Insurance Co. v. Cardillo**, 225 F.2d 137 (2d Cir. 1955), **cert. denied sub nom.** Under the last employer rule of **Cardillo**, the employer during the last employment in which the claimant was exposed to injurious stimuli, prior to the date upon which the claimant became aware of the fact that he was suffering from an occupational disease or injury arising naturally out of his employment, should be liable for the full amount of the award. **Cardillo**, 225 F.2d at 145. **See Cordero v. Triple A. Machine**

Shop, 580 F.2d 1331 (9th Cir. 1978), **cert. denied**, 440 U.S. 911 (1979).Claimant is not required to demonstrate that a distinct injury or aggravation resulted from this exposure. He need only demonstrate exposure to injurious stimuli. **Tisdale v. Owens Corning Fiber Glass Co.**, 13 BRBS 167 (1981), **aff'd mem. sub nom. Tisdale v. Director, OWCP, U.S. Department of Labor**, 698 F.2d 1233 (9th Cir. 1982), **cert. denied**, 462 U.S. 1106, 103 S.Ct. 2454 (1983). For purposes of determining who is the responsible employer or carrier, the awareness component of the **Cardillo** test is identical to the awareness requirement of Section 12. **Larson v. Jones Oregon Stevedoring Co.**, 17 BRBS 205 (1985).

The Benefits Review Board has held that minimal exposure to some asbestos, even without distinct aggravation, is sufficient to trigger application of the **Cardillo** rule. **Grace v. Bath Iron Works Corp.**, 21 BRBS 244 (1988); **Proffitt v. E.J. Bartells Co.**, 10 BRBS 435 (1979) (two days' exposure to the injurious stimuli satisfies **Cardillo**). **Compare Todd Pacific Shipyards Corporation v. Director, OWCP**, 914 F.2d 1317 (9th Cir. 1990), **rev'g Picinich v. Lockheed Shipbuilding**, 22 BRBS 289 (1989).

Summary of the Evidence and Findings of Fact

Claimant's Testimony

Robert R. Pierce ("Claimant" herein), born on January 23, 1923 testified he has about eleven and a half years of formal education and began working in March of 1948 as a traditional longshoreman or stevedore on the docks in the Sacramento/Stockton areas. He began as a laborer and gradually worked his way up to an equipment operator and he had duties of operating cranes, bulldozers, forklifts, front loaders, bobcats, etc. Beginning in the 1950s and while working on the docks, Claimant also operated his own part-time trucking company, on a seasonal basis for the first three or four months of the year, "hauling tomatoes into Manteca Cannery." He continued that seasonal trucking business, later hauling grain, until his last day of work as a longshoreman on June 25, 1991, Claimant remarked he then had his son helping him, as well as additional drivers to pull the trailers as he began to drive less and less by then. However he also testified that as of hearing he was working about seven months each year, primarily hauling grain off ranches to grain mills in his six sets of grain hoppers. He testified that in 1997 he averaged eight hours a day, five days a week, six or seven months or the year in this business, driving four hours a days, and waiting four hours at grain elevators. His tractor was four and a half to five feet off the ground, and he thought that pesticides might have been put on the products he transported while growing in the field. (TR 47-53, 74-77, 80-89, 95-97.) In 1990 and 1991 Claimant netted $7- to $10,000.00 per year in that trucking business and he averaged about $10,000.00 net per year after he left the docks, his gross in the years 1991 through 1998 ranging between $36,000 to $67,000 with significant equipment depreciation deductions. Claimant was still operating his trucking business as of the time of the hearing, at age 76, and apparently that work still continues.

According to Claimant, he began working with petroleum coke sometime around 1952, mostly while working for Diablo Services Corporation ("Employer") in Pittsburg, Claimant testifying he worked with petroleum coke mostly between 1981 and 1991 at the Pittsburg facility. There were other places he worked that shipped petroleum coke but his minimal work with such, in Stockton CA, was more than ten years before 1991. His PMA records reflect he worked nine days 6/15/91 through 6/25/91 for DSC in Pittsburg as a petroleum coke pile caterpillar operator and that such work for DSC was a significant portion of his yearly work hours dating back to 1980, at times in some years as a DSC shoveler. The records reflect that in 1991 and prior years he also worked for other stevedore firms, including for a grain elevator stevedore, in a variety of equipment operator job categories including as a bulldozer/caterpillar operator. EX 24-25. He also worked as a holdman several times, including in 5/1991.

The DSC Pittsburg facility at and within which claimant worked with the petroleum coke was, by the testimony of all the witnesses who worked there, specifically or by implication, an open to the air

facility adjacent to or in close proximity to the facility's dock area where the stored petroleum coke was ultimately loaded aboard ship by a conveyor belt system. There is no refinery at this DSC Pittsburg CA facility. The petroleum coke arrived at DSC Pittsburg in trucks from the Tosco Avon crude oil refinery ten miles away, where the petroleum coke was one of the results of this refinery's processing of crude oil into gasoline. Tosco is DSC's parent company.

. Claimant testified over the years he worked with different kinds of coke, regular and "hot" coke. Tr. 55-6. He described regular petroleum coke as "black, sand-like" and it is "dry, dirty, dusty" and so-called "hot coke" was - - perhaps "300 or 400 degrees when they dumped it out of the trucks ... you could see the steam coming off of it" to such an extent that "when you went through the pile with the Cat [a caterpillar tractor] you could get those hot kind of burning fumes (or vapors) that you'd breathe through your mask." He believed he worked with the "hot coke" at DSC four or five years and stopped working with "hot coke" sometime in the 1960s when "they quit taking it." According to Claimant, inhaling those vapors "made (him) feel dirty or kind of lousy after (he) worked in it." In the 1970s he first wore a paper face mask for protection and he then began using "cotton masks, which was like a paper front and then the cotton backing with two straps you put around the back of your head." He had to wear a mask because of the "dirt and dust," because it was difficult to breathe through his nostrils and on those days when "the wind (was) blowing just right, you had a hard time seeing sometimes" the visibility was just so bad. The conditions were especially bad on hot days, even while wearing a face mask and using a dish towel as a hood. When working with the dry coke and wearing a mask, he still inhaled fumes, which he described as not really strong but a "smelly" substance. His work clothes, as well as the areas of his face not covered by a mask, were "black and dirty at the end of the day." He also daily inhaled the exhaust and smoke generated by the diesel engines of the bulldozers being operated there, but he advised the newer turbo "cats" of later years, as of the early '70s, were much better in terms of diesel fumes. (TR 53-63) While the petroleum coke powder was watered down by a sprinkler system to keep the dust from blowing out of the environment, this still did not prevent the dust from being blown around the work environment. (TR 99-103)

Claimant last lifted sacks for DSC in the late 1950s and twice in the last year of his DSC employment he was a special shoveler which involved using a broom or shovel to shovel excess petroleum coke into the hopper after it has been dumped by the trailer truck.[6]

As noted, Claimant left the Employer on June 25, 1991 and, as part of pre-operative clearance for his right hip surgery on December 4, 1994, he underwent certain diagnostic tests, and he was told by Dr. Tanaka [his hemotology specialist] he "had a real low white cell count and a low platelet count." He did not recall any fatigue or tiredness symptoms at that time. Claimant testified when he asked the doctor as to the etiology of such condition, the doctor asked him if he had ever worked petroleum products. Claimant answered in the affirmative. [On review, Dr. Tanaka's records/reports do not mention petroleum products.] He has had several "platelet transfusions," all of which made him feel "a lot better." Claimant testified "probably about 1989, something like that, maybe," he began to experience right hip problems, although in 1941 he fell off a motorcycle, sustaining some minor bruises without any lasting effects. In 1989 Claimant went to see Dr. Boettger [his treating family physician], x-rays were taken and the doctor told Claimant "that the cartilage was almost gone" and that it was "just a matter of time" before he would "be in a wheelchair." [Not reflected in Dr. Boettger's reviewed reports/records.] Claimant testified he began to have difficulty climbing ladders around 1990 and he "used to take a lot of ... half steps," especially when climbing into or out of the cranes. He also had difficulty at that time climbing into and out of his truck;

---

[6] He testified he recalled several DSC jobs in the year prior to his retirement involving work aboard ship, a bulkhold job, loading the ship. A so-denominated or distinguished job is not reflected on the PMA records for this period. Since he also testified he never operated a dozer aboard ship for DSC assumably these bulkhead jobs would not also be PMA identified as a "pet coke pile cat" job. Tr. 76-77, 95.

he has been unable to climb any ladder at all since just before his hip operation on December 4, 1994. (TR 104-109)

Claimant testified that in his DSC work driving a caterpillar tractor, the most strenuous or demanding heavy duty was in the early days, on the old "Cats," operating the left and right foot brakes – "the hardest part" of operating the "cat" at that time. In the last year of his DSC "cat" work he described as "strenuous" climbing up/down the "cat" 10-12 times each day to reach his seat 6-7 feet above ground level. Claimant was asked by his counsel to address Dr. Stark's opinion that if he had hurt himself at DSC both hips would have hurt rather than one. He responded as he is right hand dominant he'll usually use his right leg or hip as well as his right arm more than his left, he guessed when he climbed onto the "Cat" he put his right foot up first over the track to pull himself up and he was then led by counsel to conclude that might account for some additional work on one side or the other, over a period of years. Tr. 67-8.

Claimant testified that while he worked and was paid for an eight hour shift at DSC, and was at this facility for eight hours, he actually drove the "Cat" for four hours. Ms. Kelsey's later testimony indicated the union longshoremen were actually paid for 10.5 hours, to compensate for 2.5 hours travel/non-lunch time. When asked on cross examination whether his direct testimony he got in and out of the "Cat" 10 or 12 times during this workday was accurate, claimant indicated he smoked. And he would sometimes back up and get off the cat just to have a cigarette. Or a Coke, indicating in this answer that when he got on and off the "Cat," it was close to 10 times a shift, maybe eight times, but not every shift. Tr. 102-3.

Claimant on cross examination stated the "Cat" did not have steps to climb from the ground to the floor of the cab. Rather, he climbed up "the back of the [Caterpillar] tracks," putting his foot up on the cleat, grabbing an arm hold, entering the Cat at an angle and then turning until up on the track where he then climbed and walked forward on the track to the point where he stepped on to the end where the floor with the seat was. Tr 103-4, 107-9. Then on redirect he was led to state that "yes," in the last year of his employment, "that notion about pivoting on your leg and pushing off, is that something you would do? Pivoting on the right leg and pushing off? Is that the motion you would take to get up onto the track?" In recross on this testimony he indicated that what leg he swung when going from cleat to track and when performing the described motions to ascend the "Cat" depended on what side of the "Cat" he got up on. Although he indicated the "Cat" operator could ascend from either side to perform the required climbing, he testified he probably usually always got up and down on the same right side.

At the time of his retirement from the docks on June 25, 1991, he testified his right "hip was bothering" him, although the symptoms were "not bad." However, the hip problems began getting a little worse and he was afraid of having the operation several years earlier than he did. However, the pain became so severe that the doctor persuaded him to undergo right hip total replacement on December 4, 1994.

Claimant testified he retired as he was not feeling that good and not getting any younger. He was led to testify he was experiencing fatigue and a tired feeling in June of 1991, was led to testify his hip's condition had something to do with his retirement and implied he was a "hungry longshoreman" and he wanted to continue working as long as he could. Claimant testified he last rode a motorcycle in 1947 or 1948, fell off a ladder once but did not hurt himself as he "got up and walked away," and did not remember telling any of his doctors about this ladder fall. He had a left knee replacement on December 24, 1996 and, according to Claimant the knee is "sore sometimes but it's doing good," Claimant remarking, "Right hip is not quite as good as the left knee. Maybe 60 percent, something like that," and he still has "a little trouble... raising (his) leg up" and he "usually takes(s) half steps."

He cannot return to work as a longshoreman because he does not feel he can do the job physically, especially the climbing, his hip is not 100% and he has had a knee replacement, although he is able to

continue his seasonal trucking business as he has others to help him. (TR 63-72, 103-105) He also testified that in the last year of his DSC work he did not carry 100 pound sacks and he did not do any loading or unloading work where he pivoted on his right leg every time he lifted something. (Tr. 99)

Claimant testified after he left the Employer on June 25, 1991, he resigned from the union and became eligible for a union pension. Dr. Boettger, his family doctor at that time, was treating his hip problems, taking the blood tests and giving him injections in the right hip area, and Dr. West a chiropractor was giving him hip therapy. When he began to have chiropractic treatment for his hip, he did not seek authorization from the Employer. Claimant lost no work time prior to June 25, 1991 because of his right hip and no doctor has advised Claimant to stop working, either before or after June 25, 1991. (TR 77-80)

Claimant's medical coverage has paid for his treatment by the various doctors who have examined him but he has paid for twelve chiropractic treatments by Dr. West and Medicare has paid for ten of those treatments - - the costs varying between $20 and $27. Claimant's attorney has sent him to Dr. Duhan for evaluation of his myelodysplasia, and to Dr. Fong for his orthopedic problems. Claimant has given to all of these doctors accurate histories as to exactly what work he did for the Employer. (Tr 84-94)

Leslie Frey and Frank Leonis

Leslie Frey worked as a longshoreman and retired prior to claimant early in 1991, after 45 years of such work. Mr. Frey testified that in the last year of his work he also worked a number of times driving a Caterpillar in the DSC petroleum coke product, that he would not disagree with anything the claimant described as to the DSC conditions; that such work was especially dirty and his face "was completely black" at the end of the day, that the face mask he wore did not provide that much protection and that he "had sore eyes for a week after (he) got off that job." He last worked with that hot coke sometime in the mid-1980s, and inhaling its vapors and fumes caused a burning sensation in his lungs and chest. (TR 110-121) He thinks the petroleum coke caused his cataracts and glaucoma, although no doctor has told him this.

Frank Leonis, who still works as a longshoreman, loading and unloading ships "mainly in Stockton, but (whose) jurisdiction covers Pittsburg," and who also has served an officer of ILWU Local 54, testified he first worked for the Employer at the Port of Pittsburg in 1967, he had worked there for the Employer in the early 1990s, he has operated the "cat" for the Employer and has also worked on the ships for them, and that the coke product had an "aroma" that "smelled like oil" and you could see vapors coming off the coke when it was trucked in. The heaviness of the aroma depends on how it comes from the plant, whether it comes in hot or cold. According to Leonis even today it sometimes comes in "hot." He then testified that in the last year he had not worked with or in hot coke, but he could still feel the coke's warmness, it got warmer as the "Cat" pushed lower down, and the warmer the coke the more aroma it had.

Leonis also testified that even if the coke is cold, when he uses his "Cat" to remove the top, he can see vapors coming off it, but if he works the coke on a really hot summer's day he does not see vapors. He also corroborated the prior testimony as to the dirty and dusty work environment, the coke resembling "black sand" as it falls into the hopper and he indicated that it sometimes comes wet and sometimes they put oil on it.[7]

The mechanism of the DSC Pittsburg petroleum coke processing operation Leonis described was generally in accord with and more fully described by Ms. Lelsey.

---

[7] The latter "oil" information from Leonis was in response to ALJ's question, followed up by claimant. See TR 195-211, at 205; Tr. 208-210 redirect where the term "spray" was first used. Ms. Kelsey did not explain how the Bunker Oil was "blended" or added to the petroleum coke.

Analysis and Evaluation of DSC Caterpillar Drivers'Testimony

These hot coke responses of Leonis would indicate he either was not testifying to the differences between the "hot" (212 degrees to 400 degrees) coke, and the regular coke handled of claimant's and Frey's testimony, or Leonis was indicating that as of 1998-1999 DSC was again bringing in "hot" coke. The latter is inconsistent with Ms, Kelsey's testimony. However as a fact it is here found the "hot"coke of claimant and Frey's testimony was last handled at DSC no later than the 1980s, sometime and probably long before claimant's 1990s DSC employment and "hot" petroleum coke was not involved in the claimant's DSC exposure the last nine days of his 6/91 employment, the exposure days at issue here.[8]

Neither Frey nor Leonis described the physical exertional demands and operations of the "Cat" tractor or dozer operator in the DSC petroleum coke operations, or their physical exertional activities, or the "Cat" climbing activities the claimant described. Mr. Frey's generalized lack of disagreement with claimant's testimony, in addition to relating nothing specific on these points, is of no weight given its manner of presentation on these factual issues, issues of significance in this particular case on the orthopedic prong of his claim. Neither of these workers testified to any smell, aroma or fumes exposure experienced at DSE but from the petroleum coke operation, or made reference to diesel fumes exposure from "Cat" operation.

The claimant did not testify to any sticky brakes in describing his 1991 DSC dozer operations. He testified only that with the old Cats, which he had not driven in a couple of years, he had to push hard. TR. 65-66.

It is found that when employed the last nine days of 6/91 the claimant while at the DSC Pittsburg facility for eight hours daily or 72 hours over this period, operated his Caterpillar dozer for only four hours each day, or a total of 36 hours in this period.

Gidget Kelsey of DSC

Gidget L. Kelsey, who has worked for the Employer since March 1, 1988 and who was hired as a terminal staff assistant, testified she then "did all the longshore payroll, processed all the ship's papers and documents, handled all the outgoing invoicing for the movement of cargo, answered the phones, (did) general secretary's duties, typing, lots of different responsibilities." She performed those duties until May of 1995, at which time she "was promoted to the office manager." She then "took on an additional responsibility of handling all the accounts payable," now oversees her former position and as office manager is authorized to make DSC purchases and has been in charge of DSC operations at times when the petroleum coke is brought into the facility. She maintains the facility's MSDSs. The Employer is a wholly-owned subsidiary of the Tosco Corporation and all the few regular employees at Diablo Service are Tosco Corporation employees. Ms. Kelsey "(c)ontinually" has observed the process of the arrival and dispatch of petroleum coke and calcined coke at the Employer's facility and, according to Ms. Kelsey, "Petroleum coke is a byproduct of manufacturing crude oil into gasoline and high end gasses, benzene, lots of different petroleum products."

The Avon Tosco refinery is located in Martinez, about ten (10) miles away from the Diablo Service Corporation facility in Pittsburg. (TR 279-282, 300-302) Ms. Kelsey testified that after the crude oil has been refined into petroleum coke at the Avon refinery it goes into a pond of water at the

---

[8] The only toxicological difference between "hot" and cold petroleum coke's effect, according to Dr. Cayton was that "hot" coke would be aerosolized.

Avon refinery and is then pushed out on an embankment so the water can sieve off prior to being loaded into the trucks which transport it to DSC Pittsburg. This she has seen. Tr. 321.

Ms. Kelsey testified that from the Avon refinery petroleum coke is "brought in on bottom dumping trucks. Brought into the facility. The trucks are unloaded into a bottom dumping hopper. [From there t]hat product moves along the conveyor system into a stockpile area. That product is then fettered around the stockpile area with a bulldozer, cats. Remains there until we have a vessel alongside. When we do have a vessel then those cats push that cargo to a down-loading bulk head, (then) the coke falls onto another conveyor system and it's conveyored on board the ship." According to Ms. Kelsey, her "best estimate" was that calcine coke was last moved out of the Diablo facility in late 1989 or early 1990; calcine coke is "still a petroleum coke" and "the normal petroleum coke that we handle is a small granular, almost like sand consistency." Whereas, "calcine coke is in larger chunks. It comes directly from the coker via truck, bottom unloading truck, put on a conveyor system directly to go aboard ship. It's not stored at our facility at all." Calcine coke is not handled, maneuvered or manipulated by the caterpillar operator. (TR 282-284)

Ms. Kelsey further testified that Material Safety Data Sheets ("MSDS")[9] are kept on "(a)ny product that would be on the facility" relative to the "health characteristics or physical characteristics that could cause environmental or personal or property damage;" that MSDSs are kept on "virtually" all of the chemicals at the facility, such as gasoline, diesel oil, lube oil, medium fuel oil, kerosene, all kinds of greases, solvents, Ms. Kelsey remarking that "just about everything that's on the property requires us to have an MSDS sheet" and that longshore workers are not allowed to do any repair or maintenance of any equipment at the facility as that is the responsibility of the "operating engineer." (TR 285-288)

She testified that caterpillared bulldozers are not used on board the ships, that caterpillar operators are not regular employees of Diablo or Tosco but are hired through the ILWU Local 54 hall, that such employees are paid two hours of travel time from the union hall in Stockton to the Diablo facility and as Diablo "is considered a bulk facility with continuous cargo, so they're paid for an eight and a half hour day because we don't break for a regular lunch like some employers would." She testified that a caterpillar tractor operator actually operates the tractor for four hours during the shift, that certain breaks are permitted during that four hours but certainly not seven or eight breaks during that time period as such "would (not) be tolerated by anybody." (TR 289-292)

According to Ms. Kelsey, Diablo "had a stockpiling agreement with (the) Exxon refinery in Benicia CA to stockpile petroleum coke for them when they had run into a pinch and weren't able to move their product as fast as they'd like to," that non-calcine petroleum coke would also be stockpiled by the caterpillar operators, that such stockpiling arrangement "began before (her) employment, but it ended in" 1992, that Exxon petroleum coke was handled in exactly the same manner as Tosco petroleum coke and that a caterpillar tractor operator would not be required to work onboard an Exxon ship. Ms. Kelsey "prepared and maintained" the job description (RX 26) for the longshore work performed at the Diablo facility based on her observations as to the work the longshoremen were performing, Ms. Kelsey remarking "that's the type of work that we ask those people to do when they are dispatched (by the union) for those jobs" and that, although the job description has an effective date of June 27, 1997, only the pay rates, and not the job duties, have changed over the years. (TR 292-295)

The MSDS for petroleum coke (RX 41, Issue Date 7/15/94) was prepared by Tosco Refining

---

[9] Record indicates MSDSs are issued pursuant to government OSHA requirements.

Company, and MSDSs "are distributed by the manufacturer of the product," are updated periodically as needed and are maintained by Ms. Kelsey. (TR 295-299, 302-305)

In response to cross-examination, Ms. Kelsey indicated Claimant, as part of his maritime duties, would be exposed to diesel fuel, as well as the grease used on the caterpillar tractor, that she was not certain that no changes were made between 1991 and 1994 with reference to the petroleum coke and its MSDS, that there are different grades of crude oil, that the technology used in the refining industry has changed over the years, that petroleum coke arrives at the Diablo facility at "ambient temperature" and that she has "never physically gone out to see if it's hot." She testified that she had not "detected" any aroma from the petroleum coke in the summer months but she did not work or stand in the middle of the "open stockpile yard." (TR 305-320)

Ms. Kelsey further testified on cross examination that medium grade fuel oil[10] "is blended with the petroleum coke when it's coming inbound into the facility as a dust suppressant," and that no other chemicals are added to the coke at the Diablo facility. Ms. Kelsey, after producing and reviewing the MSDS at EX 49, for what is reflected on this MSDS as trade name "Bunker Fuel, Low Sulfur Fuel Oil, High Sulfur Fuel Oil, testified that this MSDS did not indicate that the substance has a potential to cause leukemia or any type of blood or circulatory injury. (Tr 320-324) She testified the amount of this fuel oil which is added to the petroleum coke at DSE is one half of one percent of a short ton of the petroleum coke processed, a short ton being 2000 pounds of the petroleum coke. Or ten pounds of the fuel oil for every 2000 pounds of DSE petroleum coke. Tr. 289-290.

Claimant's Treating Medical History as Reflected in Treating Sources' Records

Dr. Lloyd Boettger is Claimant's family doctor and the doctor's progress notes are in evidence as RX 33 at 234-338 and these document Claimant's multiple medical problems. Dr. Boettger's first l984 record reflects the claimant then advised his father had died at age 77 of anemia, later indicated as pernicious, and a request for arthritis medication is reflected in 1990 handwritten notes.

The "progression" of Claimant's right hip osteoarthritis after 3/6/92 can be seen on his serial right hip x-rays and reports in evidence as RX 34 at 339-345. On 3/6/92 x-ray of his lumbar spine reflected severe degenerative L3-4, L5-S1 disc disease but his right hip x-ray reflected only mild degenerative changes with joint space narrowing. EX 33:332. Claimant reflected no muscular or any other disease on his 6/93 application for Class A license, with Dr. Boettger noting no extremities or spine findings which would preclude his qualification under licensing criteria, and in 1/93 he was complaining of lower back pain when doing mechanic work on a transmission.

When lumbosacral and right hip x-rays were again secured in 1/1994 progression of the lumbar spine degenerative changes was noted, with considerable progression of the right hip degenerative changes and minimal left hip degenerative changes noted. EX33:323,327-8, 273. Apparently Dr. Boettger had referred him to Dr. Luckey.

In June l994 he sought Dr.Boettiger's attention for a fall out of a truck and in August 1994 for arthritis on his right side in the back and down the leg, for which he wanted to see a bone doctor. EX:33.269. Claimant received chiropractic treatment from Dr. Randolph West in June and July of 1994 after he had fallen from a truck onto asphalt in June of 1994, and right trochanter complaints appear to be noted in connection with this fall. (RX 35 at 346-356) On 8/23/94 Dr. Murata, who later

[10] While the term "medium grade fuel oil" was used during Ms. Kelsey's testimony, this term and her testimonial fuel oil references were to the MSDS of RX 49 as it was these fuel oil references which resulted in the cross examination disclosure of RX 49.

performed both his right hip and left knee joint surgeries, evaluated him for his lumbar discomfort as well as severe right hip discomfort. At that time the claimant told Dr. Murata that over the past several years he had increased back and hip discomfort, with treatment over the past six months by Dr. Luckey, with a past diagnosis by a Dr. Del Paine of "rheumatism."It would appear from Dr. Luckey's records that Dr. Del Paine was the radiologist interpreter of the 1/6/94 films. Dr. Luckey's 2/7/94 scanty records reflect hip surgery was discussed and indicate low back pain for years, right hip pain for four or five years with chiropractor treatment two years before and thereafter for several months by Dr. West. EXs 34, 35. Claimant told Dr. Murata of a motorcycle fall trauma several years ago and a fall off a 12 foot ladder. At that time he and Dr.Murata discussed the right total hip arthroplasty claimant was very interested in for his severe right hip osteoarthritis. But claimant wanted to wait until his business' off-season to consider surgery.

By 11/1/94 the claimant was ready to proceed to surgery, and the records of Dr. Murata reflect that, unlike his earlier statement the Claimant as of December 5, 1994 did not recall "any significant trauma to the hip." He was admitted for a total right hip replacement. (RX 38 at 601-698, 696-98.) On Dr. Tanaka's hematology consultation for Dr. Boettger, when his pancytopenia of unclear etiology but perhaps secondary to MDS was found, claimant advised there was a trauma to his right hip in a motorcycle injury at age 19, he dated right hip symptoms' onset to approximately five years ago, noted while sitting truck driving, with an increase three years ago diagnosed "as rheumatism."[11] He reflected no prior symptoms of interest to Dr. Tanaka's evaluation. After hip surgery and bleeding following a bone marrow study, MDS was diagnosed. This was confirmed by a study evaluation at UC Davis, and he required platelet/packed cells transfusion. Claimant thereafter continued under the care of specialists Drs Tanaka/Dighe for this condition which was declared stable, his anemia noted as quite mild and improving. EX 37.

By 6/1995 he was doing well, he was not seeing Dr. Murata for any post surgery hip complaints but for two months of shoulder discomfort he related to his activities in replacing a starter in a truck. EX 38:640 And in 9/1995 he hurt himself when crawling on a truck. In 11/95 he saw Dr. Murata for left knee complaints after striking it against a bumper. Dr. Murata thought the large left knee bloody effusion he aspirated had to do with his pancytopenia and decreased platelet count and apparently a platelet transfusion was performed by Dr. Dighe sometime before he saw another joint surgeon for a second opinion on a total left knee replacement (TKR) for his severe joint arthropathy. TKR was not then, but was later in 1997 recommended, his blood condition a consideration. EX 33:291. Dr. Murata's records in 1995-l997 reflect bleeding and infection secondary to his MDS was a considerationa as to any further surgical procedures on his osteoarthritic left knee. EX 38:620-633. After the left knee buckled in 11/96 and he fell, with another incident of blood on knee aspiration, Dr. Dighe indicated a platelet transfusion order would be required prior to any arthroscopy surgery. EX 38:631. Any left knee surgery was deferred into 1997 but in 7/1997 he twisted his knee, again while in his truck. Claimant then indicated an interest in left knee TKR sometime in 12/97. Dr. Dighe felt the infection risk was quite low and the TKR was performed in 12/97 after platelet/packed cells transfusions. He recovered with no significant complications.

Blood/Bone Marrow/Circulatory Claim – Medical Testimony and Opinion

Dr. Duhan–Summary of Report and Testimony, with Preliminary Analysis and Evaluation

Dr. Duhan is a Board certified internist who testified he is Board eligible in occupation medicine

[11] There is then confusing information reflected as to a three month hospitalization in connection with a bone marrow procedure, such a history not otherwise reflected in the totality of the evidence on his bone marrow condition.

and as such this eligibity puts him Board eligible for the toxicology board which is part of the occupational medicine boards. Tr. 126

Dr. Duhan refers to this matter in his February 24, 1999 report (RX 32 at 212) as "clearly an extraordinarily complex medical-legal evaluation, involving a discussion of toxic exposure and the development of myelodysplasia and consideration of the etiology of his hypertension." Until Dr.Duhan's evaluation opinion almost three years after the MSD occupational circulatory disease claim was filed and after this case was Noticed for formal hearing, the only medical evidence addressing the question of occupational causation was Dr. Cayton's 1997 evaulation report for Employer. There is no reflection in this record that the claimant's treating MDS blood/bone marrow specialists, Drs. Tanaka and Dighe, ever attributed his blood condition to any occupational exposure, including to petroleum products, nor is the advice claimant testified he received as to petroleum causation reflected.

After the usual social and employment history, his review of Claimant's post 1993 medical records and prior medical history, including diagnosis of and treatment of hypertension since "the early 1980s," his physical examination, and his consideration of the petroleum coke MSDS provided, RX 41 assumably, Dr. Duhan concluded Claimant's myelodysplasia was causally related to certain toxic substances to which he was exposed while working including coke dust or powder. (RX 32 at 218) Dr. Duhan was advised by claimant that in addition to his work exposure to coke powder, which Dr. Duhan testified he understood to be while working the piles in ships' holds, Tr. 169, he also loaded recently fumigated bulk grain and handled treated wheat, barley and corn and in all of these operations he was provided with a cloth mask. Dr. Duhan testified that he had no idea as to the richness of the petroleum coke the claimant handled at DSC but he recalled claimant told him he could smell the petroleum product itself, Tr. 170-71, and the claimant also told him he could smell the pesticide on the grain he handled. Dr Duhan testified that the fumigants, the haolgenated organic compounds from grain exposure in such circumstances, are also a causative factor in MDS.

While claimant told Dr. Duhan he continued to drive a truck after 1991, Dr. Duhan's report does not reflect he was informed he was trucking grains, notwithstanding Tr. 174:18-23. Dr. Duhan stated on the basis of physical capacity his disability from MDS precluded longshore work and substantial work, and he needed to be precluded from further exposure to polyaromatic hydrocarbons (PAHs), not there defined, but defined and referred to during the course of his testimony where he indicated they are found in fire fighters and throughout the worker' compensation arena. 80% of his practice is forensic. Tr. 131-149.

Dr. Duhan's 2/24/99 report to counsel indicated abstracts of several articles which discussed the mutagenicity of petroleum coke were included at the end of his report. These abstracts were not identified or included in Dr. Duhan's report, but his abstracts' paragraph's reference is to coke oven workers. While respondents' counsel sought the abstracts Dr. Duhan referred to, these abstracts were not exchanged until a number of months following 2/99 report and just prior to trial, in late 5/99. Dr. Duhan testified that as of 6/15/99 he had read only the abstracts on these medical articles, similarly searched for a few more abstracts related to MDS the morning of his 6/15/99 trial testimony, had sent away for the original articles but had not yet received or read them.

On cross examination he indicated he considered these abstracts when giving his 2/99 opinion and following his standard practice the patient's chart would have reflected both a notation to this effect and copies of the considered abstracts. Absence of this information from his subpoened records was an aberration he testified. Tr. 185.

Dr. Duhan in his 6/15/99 direct testimony indicated that retrospectively he thought there were early signs of MDS in l986 blood count test results. He did not cite to where, or in what specific 1986

medical report he reviewed this 1986 blood test is, and his later testimony indicated he was not provided with this 1986 report but rather he picked this information up from a review of a Dr. Larkin record in Dr. Cayton's records' review. Tr. 132, 140:5, 140:13, 163. However neither Dr. Cayton's records' review nor Dr. Duhan's reflects any records earlier than 1994, or any 1986 record. Claimant's Post Trial Brief does not cite precisely to where in the 1986 or pre 12/94 medical records this fact his argument uses to depreciate Dr. Cayton's testimony is located. He cites only to Dr. Duhan's testimony which is imprecise as to original source record.

Dr. Duhan indicated he had recently taken abstracts of medical articles off the Grateful Med Web site[12] on PAHs' interference with DNA giving rise to blood disorders and in some cases cancers. He had researched in the area of coke powder, derivative of coal produced petroleum products that contain PAHs and testified that "off gassing" in the production of coke produces carcinogenic substances.

While Dr. Duhan indicated claimant was not involved in coke production, he stated that from his prospective the whole question in this case was the extent to which the powdered coke claimant handled contained "these dangerous PAHs" and his research was in the area of those [exposed individuals] responsible for removing coal pitch tars, PAHs, from the coal. Dr. Duhan on direct testified it was medically probable that "if claimant was smelling 'off gassing' of petroleum products ... we know to be associated with PAHs" it was more likely than not that exposure contributed further to the insult of his bone marrow and hastened the MDS, as did his exposure to recently fumigated grains and some of the fertilizers (halogenated organic compounds), all myelotoxic substances, from which he should be prophylactically restricted. As Dr. Duhan saw it, a cumulative effect. Tr. 139-42. Dr. Duhan in his direct testimony's references to the "off gassing" of the petroleum coke at DSC did not specifically define and describe what he meant by his use of the term "off gassing, " the basis for the injurious PAH exposure he assumed from the smell, and as this information was presented he impressed as thereby indicating the petroleum coke itself and alone "off gassed" what he believed was injurious from this product alone. Tr. 122-150. That was the fact finder's impression from his direct testimony and the information he disclosed to support his expressed opinions.

But Dr. Duhan had no medical articles to this effect, and instead cited to articles which he testified suggested a number of risk factors for MDS. He had no articles that substantiated his theory that exposure to the products he was referring to here, either inferentially or specifically, the coke powder derivative of coal produced petroleum products, are toxic to the blood cells. But he though there was a great deal of data on PAHs being myelotoxic from research such as on fire fighters and other occupations. However Dr. Duhan in his testimony or theory as here expressed did not mention or consider petroleum coke workers, but rather his testimony as to the articles and workers studied on which he was relying in his responses to this questioning were coke oven workers. As it appears only coke oven workers were the subject of his report's abstracts. Dr. Duhan testified, in his explanation and justification for such coke oven workers' use: "people who are further along the line and away from the coke ovens themselves still have some risks." Tr. 142-3. When asked for citation to any articles which could lend support to his theory that handling petroleum coke products in any way causes MDS Dr. Duhan indicated he had a 1996 abstract which was late submitted in this proceeding in terms of exchange, and which he failed to put in his original report. Dr. Duhan stated this abstract is "a mutagenesis biomonitoring human exposure to environmental carcinogenic chemical, so they talk about that." "That"assumably is MDS, but this carcinogenic chemical article, like a number of the 6/15/99 abstracts Dr. Duhan cited as support for his theory, did not become the basis for his later 6/30/99

[12] Medline, Grateful Med, produced by the National Library of Medicine, Bethesda.

testimony.[13] See also Dr. Duhan's medical probablity testimony at Tr. 146.

The in-person impression this 6/15/99 testimony left with the fact finder was that Dr. Duhan was not testifying based on personal knowledge and research on petroleum coke workers such as claimant and his witnesses, or on workers engaged in whatever refining and processing process is involved at a refinery where crude oil is processed into petroleum coke, but that Dr. Duhan in large measure and because of the absence of any supportive medical article research was basing his testimony, opinions and theories on the coke-making process from coal, on coal processing, to result in PAHs or blood toxic products. Notwithstanding he stated once he knew the claimant was not a coke oven worker, Dr. Duhan's references here and throughout on cross examination to coal, and coke oven processing of coal as support for his opinions left the fact finder uneasy as his testimony was heard 6/15/99. Uneasy as to the basis and foundation for his and these theories, and it raised questions as to his amalgamation/confusion, lack of distinguishment, of the two different substances, coke from coal and petroleum coke from crude oil, and any different processes involved. It left the fact finder unsure as to this represented expert's explanation/understanding of the petroleum coke process, and was he testifying they were the same? As argued post trial by respondents it did not inspire confidence.

Dr. Duhan further opined that Claimant would require future medical treatment for his MDS, that "(h)ematologic monitoring should be performed on a biannual basis by experts in that field," that "Dr. Dighe appears to be performing a competent job at just that, and should continue" and that Claimant "may require more intensive care if he progresses to frank leukemia," as such progression has been reported in medical literature. Dr. Duhan testified he thought Claimant's MDS was slowly accelerating and indicated he thought 30%-40% of MDS patients transform into leukemia. Claimant's prognosis was guarded but not grim. He noted he had already needed transfusions but Dr. Duhan made no reference to the comments on claimant's blood condition in his treating orthopedic surgery reports where his treating specialists determined, with transfusions, that surgeries could proceed notwithstanding his blood condition.

On 6/15/99 cross examination Dr. Duhan indicated that in determining causation the volume or intensity of toxic exposure is important, and that epidemiology is the studies of populations. From experimental data it is known that benzene, part of a class of PAHs, is myelotoxic and has a cause and effect relationship with MDS. One of the major reasons Dr. Duhan believed there were PAHs in the DSC coke claimant handled was because claimant told him he was still able to smell the petroleum characteristic of the coke, he was told DSC handled petroleum coke but he had no industrial hygiene reports on air level concentrations at the facility. While he testified there are a number of studies looking at the biomarker for exposure to PAHs, when asked where in the study he cited it was mentioned PAHs effected or had a causal relationship with MDS Dr. Duhan indicated it did not and indicated in response he thought the best study was the *Chu* article, **The Toxicology of Coal Liquefaction Products, An Overview,**[14] which talks of the teratological effects of developing tumors and changes in the DNA. Dr. Duhan testified coal liquefaction materials to him meant specifically coke. And further he testified, in coal liquefaction a coal comes out of the ground that contains coke and other petroleum distillates in it or the petroleum in it that when heated it becomes distillates, and it is those distillates which contain the PAHs the *Chu* study indicates can cause tumors, mutagenicity and carcinogenicity. While Dr.Duhan agreed the *Chu* article talked about the development of tumors and cancer rather than MDS, he testified MDS is considered an intermediary in cancer development. Tr. 161.

---

[13] Claimant's post trial arguments as to Dr. Duhan's medical articles' support includes only the three evidenced, and the one excluded discussed below.

[14] **Toxicology of Coal Liquefaction Products: an Overview.** I. Chu, D. C. Villeneuve and G.G Rosseaux, Journal of Applied Technology. 11/93 Referred to herein as *Chu*.

On cross Dr. Duhan could not give any reasonable opinion as to whether or not the claimant's type of blood cell destruction was going to lead into leukemia, did not care to speculate on the temporal relationship between the initial diagnosis of MDS and the progression into leukemia and testified he had not reviewed any medical literature lately supporting his indication 30%-40% of MDS patients develop leukemia and for this reason he meant to be vague and ambiguous in his direct testimony on this point.

On cross examination Dr. Duhan testified he was not able to find any published reputable medical journal articles which had a good number of control group participants which had double the incident of MDS development as in the regular population, the protocol a professional evaluator uses to insure the literature relied on is still relevant or well accepted. The best Dr.Duhan could do he testified was the studies that looked at the handling of coke oven products varying distances from the coke ovens and he extrapolated as best he could from these and came to his conclusions. While Dr. Duhan testified it was his understanding the coke powder his report described was the same thing as petroleum coke, he said he wanted to make clear there was a wide variety of petroleum cokes in terms of processing and removal of the petroleum distillates and they could range from being very rich in PAHs to being practically devoid of PAHs. He also described his understanding of what coke oven workers do at Tr. 176-77, working with coal taken out of the ground, at this point indicated that in his field of knowledge he was not aware of any other method of producing coke beside the distillation of coal by these coke ovens, and all the abstracts he relied on in his testimony dealt with this type of coke production.

Dr. Duhan on cross was asked whether as to the PAHs in the petroleum coke that had already left the furnace and been transported someplace else, there was any way of determining the PAH concentration level beyond the empirical data of someone telling him it smelled like a petroleum product. He indicated it could be tested, an industrial hygienist could heat it and determine "if the off gassing products are still present in the material."When he was asked on cross as to whether there was any medical literature which indicates what concentration of PAHs is necessary to cause the type of DNA alteration and blood cell changes he described, he said there was, in relation to fire fighters. There were PAH levels that were considered acceptable and PAH levels considered dangerous he testified, but he did not have it presently before him and had not reviewed it because he did not think he would be asked that question. Tr 180-81.

Dr. Duhan on cross testified he had no reports on the richness of the petroleum coke transported through DSC but it would be fair to say the drier the powder, the less gas remains in the powder and it was in response to this question that he indicated one of the articles he submitted showed that sometimes the coke powder, which may be dried is treated with other petroleum products so it does not spontaneously combust and catch on fire. But he agreed the article he referred to[15] concluded there was no evidence suggesting the so-treated coal would pose any greater carcinogenic risk from petroleum coke. He here indicated, apparently from the article, that coke powder is treated with a number of different products but that particular product was not particularly carcinogenic. It was this cross examination testimony within Tr.l78-180 that produced Dr. Duhan's first indication he might be or was interpolating some other substance into the petroleum coke on which his report and all his prior testimony was based, he was adding something to the petroleum coke of the RX 41 MSDS, the ostensible sole basis of his consideration in report and direct testimony. Dr. Duhan then testified based on the MSDS it seemed like the petroleum coke was pretty benign. Tr. 180.

Dr. Duhan also indicated on redirect that his injurious exposure opinion on the claimant's last nine days of work in the DSC coke piles depended on whether "indeed this was off gassing and [it]

---

[15] Dowby study not in evidence or submitted within CX 8. Tr. 178-79.

represented a significant PAH challenge." While he indicated the petroleum coke smell/aroma would signify enough to him, to a reasonable degree of medical certainty, that it had some of the toxic compounds in it, he would like to do more research on overthresholds and things like that but in his opinion it represented some form of exposure. He then stated the MSDS on the "benign" petroleum coke he was shown and which he used in his report did not reflect other products, which based on his experience working in this field might have been added. Added, he thought, to prevent spontaneous combustion of the petroleum coke. He did not enlighten specifically as to what experience he had with petroleum coke on which he could base this statement other than a review of an article (Dowby), which apparently reflected no greater carcinogenic risk from the addition reported there.

This was the first indication by Dr.Duhan that his opinions, in either his 2/99 report or his prior direct testimony at Tr. 112-150, were based on any such factual information or knowledge or assumptions as to additions to the petroleum coke, or to RX 41. Or on any petroleum product but the petroleum coke. This testimony indicated he was using what he represented was factual information from somewhere, information undisclosed until the foundation of his opinions was explored on cross examination, to assume additives and a different exposure product than the petroleum coke of the MSDS he was given. The coke itself probably varied too was also his assumption, and he then testified his opinions written and testified to 6/15/99, were based on his assumptions as to other, until now, undescribed and unrelated substances in the petroleum coke of this claimant's last nine days of his DSC employment. Only if it was shown he was not exposed to any PAHs would Dr. Duhan retract his opinion. Tr. 185-91.

On redirect when asked if there was a relationship to their mutagenic change potency between the amount of noxious compounds in the coke and the amount of exposure, Dr. Duhan indicated the more exposure the greater chance of a gene mutation leading to a tumor and he stated his opinion here was based on exposure from 1948 until 1986 when, on his retrospective review of the blood tests at that time, the very first changes were elicited.

Further Analysis and Evaluation of Dr. Duhan's 6/15/99 Presentation

Dr. Duhan's 6/15/99 redirect and recross indications his expressed opinions were based on assumed facts he did not not reflect in his written report, or his earlier direct testimony, the in-person manner and content of this testimony with other above noted aspects of his 6/15/99 presentation gave significant pause to the fact finder when heard 6/15/99.

When Dr. Duhan's testimony was heard 6/15/99 that he relied on an abstract without securing the full article particularly with a condition as rare as MDS credibility and persuasiveness was not enhanced, nor did his personal impression on the stand when these aspects of his direct 6/15/99 testimony were seen and heard. Dr. Duhan impressed as using medical abstracts not referable to petroleum coke workers, not referable to petroleum refinery workers, but using information on coal coke oven workers to extrapolate to his theory of the DSC petroleum coke "off gassing" PAHs. So it seemed from Dr. Duhan's direct presentation. Persuasiveness of his expressed causation opinions on direct was not enhanced by his indications the abstracts he referred to seemed to be recently secured, they were not in his subpoened records, and his 2/99 report appeared superficial and conclusory in several aspects including in its references to abstracts not forwarded until late 5/99 apparently referable to coke oven workers without reasoning as to claimant's petroleum coke work environment which Dr. Duhan understood to be coke petroleum exposures in ships' holds, not the circumstances of the nine DSC days at issue; or, it appears of any of his prior DSC petroleum coke work. Then there was no reflection of 2/97 benzene or radiation consideration notwithstanding the causation specifics from the medical textbook he did describe in his 2/97 report.

Since Dr. Duhan seemed to be in large measure relying on information from coal coke oven workers and carbon coal workers, but mindful and fully cognizant this fact finder was a layman hearing his testimony, when Dr. Duhan used the term "off gassing" in his direct at Tr. 122-150 to describe what he believed happened to the DSC petroleum coke his direct testimony seemed to have an imprecise flavor for a toxocology expert. While there was a petroleum product smell to the DSC coke as described by the lay witnesses, since the only information Dr. Duhan had to rely on in offering his expert opinions on direct 6/15/99 and in his 2/97 report was the fact that it was petroleum coke, the petroleum coke of the MSDS he was provided at RX 41, it seemed to this layman that the basis on which he was theorizing this petroleum coke's "off gassing" was "off gassing" of PAHs was by testimony sketchy or incompletely explained by this expert in terms of what was happening to the particular substance about which he was testifying, petroleum coke, or how what he theorized occurred occurred chemically. [Dr. Duhan did not indicate he had any information as to the "hot coke" layman described in this proceeding and which was not present at the DSC worksite in 6/91.] It seemed as if Dr. Duhan was going from the presence of petroleum coke into PAHs of coke ovens and coal coke without explaining why he believed or speculated the "off gassing" was by smell indicative of petroleum coke PAHs and this testimony and the basis for his testimony and theories seemed confusing or unclear at times, albeit the fact finder is and was mindful on this aspect of his testimony that layman ignorance may account for this impression. However he was using medical abstracts without knowledge or consideration of the medical article's full content which he had not yet secured. Also he seemed to be speculating from non-existent facts here, that claimant was or was like a coal coke or coke oven worker. Moreover his testimony the article from which he derived his initially unstated factual assumption of an additive of significance here where the article itself's particular product was not carcinogenic engendered additional fact finder reservations as to the completeness and selectiveness of Dr. Duhan's representations. It raised questions as to the basis of his represented toxocology expertise/experience in the specific area of petroleum coke and just what his unspecified experience was that based on such he could state he knew there were additives to petroleum coke, and when and how he secured this information since his Good Neighbor Clinic experience was not with petroleum coke. (See also his later DTX 51:9-52:6 testimony on the importance of his unstated additive assumption in his 6/15/99 theory.)

By personal impression and the content of his direct testimony, Dr. Duhan, a Board eligible toxicology and occupational medicine expert as presented, and prior to Dr. Cayton's testimony, created reservations in the fact finder 6/15/99 as to his persuasiveness and his expressed theories to be further adjudged as the case progressed.

Dr. Cayton 6/16/99 With Preliminary Analysis/Evaluation

Dr. Cayton is Board certified in internal medicine and pulmonary disease and he testified as to why he believes his experience qualifies him to offer opinions on this case.[16] Dr. Cayton's evaluation opinion was the only medical evidence, treating or evaluative, which considered the relationship of claimant's MDS condition to his work, and/or to his work with petroleum products, until Dr. Duhan's evaluation almost three years after 6/6/96 claim filing.

In his January 28, 1997 report to Employer's counsel (RX 21), Dr. Cayton, after "perform(ing) a complete internal medicine, pulmonary and toxic examination," and after receiving a history report of low blood levels from his exposure to toxic chemicals in 1991 and 1992, with exposure to petroleum through 1991, requiring "one platelet transfusion" (RX 21), and after the doctor reported that the "CBC

[16] He also referred to the hospital, academic institutions and other functions he has been involved with on toxic chemicals, including speaking to both claimant and defense attorneys on toxic chemicals. His CV at EX 47 would indicate his Board certification precedes Dr. Cayton's internship.

is grossly abnormal," that Claimant "is anemic and macroytic" and that there is "objective evidence of bone marrow dysfunction," concluded that "(t)here is absolutely no evidence at this time that Mr. Pierce has had exposure to a toxic chemical that has caused or exacerbated this problem" and that "there is no evidence of an occupational injury or disability at this time."

In his November 19, 1997 supplemental report (RX 23), where he reviewed listed treating reports sent him, Dr. Cayton reiterated his opinions that Claimant's "bone marrow dysfunction" is not causally related to his maritime employment, that the "cause" of Claimant's myelodysplasia - abnormalities in the bone marrow - "is nonspecific" and that there is "no clear documentation that nonsteroidal anti-inflammatories caused the myelodysplasia." (RX 23 at 116)

Dr. Cayton when confronted with the opinions of Dr. Duhan and the articles cited by Dr. Duhan in support of his opinions maintained the opinion based on reasonable medical probability that the claimant's exposure to DSC petroleum coke did not cause, accelerate or aggravate his MDS.

Dr. Duhan, whose report indicated he reviewed medical evidence no earlier than 1/94, testified at Tr. 140 he had reviewed an unidentified medical record from l986, with results quoted at Tr. 163, and he found in these blood test results large cell anemia, indications then of MDS's existence. At Tr. 163 he indicated these quoted results were from his review of Dr. Cayton's summary of Dr. Larkin's evaluation. But Dr. Larkin's UC Davis report, as reflected in Dr. Cayton's summary review, is dated 12/21/94; as it is in claimant's treating records at EX 37. No 1986 medical or blood test records, to which Dr. Duhan may or may not have been referring, can be located in this record. However Claimant uses this, and Dr. Cayton's Tr. 252 cross examination testimony on this, where he said he would like to see the 1986 record counsel referred to, to discount Dr. Cayton's abilities and opinions. In considering this claimant argument in evaluating the two specialists presented the fact finder notes the following. By no treating medical records the claimant has presented can the fact finder locate the 1986 report Dr. Duhan could have been referring to, apparently seen after his own 2/99 medical evidence review since it is not reflected there. Dr. Duhan did not indicate in testifying that, or when he had reviewed medical records following 2/99 report. While Employer presented somewhat voluminous treatment records, the fact finder as indicated above cannot locate from the citations claimant gives this factual information on which he argues Dr. Cayton's opinion is less well founded than Dr. Duhan's. Moreover if some pre 1986 test was seen, Dr. Duhan's lack of specificity as to the particular test, by whom, where, of the specific results he was interpreting retrospectively does not enhance probative or persuasive weight of Dr. Duhan's testimony, foundation and theory. There is no indication Dr. Duhan has hematology expertise or training/experience in this area. Nor that Dr. Cayton does.

Dr. Cayton testified that from his evaluation examination and evidence review there was no suggestion the claimant had leukemia or any other type of cancer or that he had any symptoms associated with his diagnosed and established MDS, from which he had no impairment when seen 12/96. He testified he believed he was competent to evaluate someone exposed to petroleum industry chemicals as the fundamental issues of causation, statistical analysis and epidemiological studies are the same with various toxic exposures, e.g.,cigarettes, petroleum products. The medical protocol used are temporal relationship, biological plausibility, dose, response relationship, experimental and epidemiological evidence. On cross examination he explained his experience/medical knowledge with coke oven workers and his recently litigated MDS case, and his recent toxicology class While he thought Dr. Duhan's understanding 30-40% of MDS patients go on to develop leukemia was probably high he explained why these percentages were very difficult to know. Dr. Cayton knew from claimant and his review of claimant's detailed depositions' descriptions that he worked at the Pittsburg bulk plant pushing petroleum coke into a hopper. Dr. Cayton, unlike Dr. Duhan as the above summary of Dr. Duhan's testimony reflects, was clear in his explanations claimant did not work at a carbon coke plant or oven, or a facility handling such a carbon coke product.

Dr. Cayton testified that in his causation opinions, since an experimental criteria or dose response relationship could not be done with an MDS patient such as claimant, he took the biggest exposure group, people with a huge exposure to petroleum products, petroleum workers in refineries, and in his causation opinions gave the benefit of every doubt to the claimant. He thus assumed for claimant the greatest such exposure possible. Dr. Cayton explained this approach in offering his causation opinion was to maximize the assumption as to the claimant's greatest possible exposure to the variety of things petroleum workers are exposed to, to put him in the broadest exposure epidemiologic group. His approach in this manner is to find out whether his work exposures made him ill. He did not evaluate on the basis of the claimant's actual exposure but assumed a high exposure. He also explained there are different types of petroleum coke produced.

Dr. Cayton testified he researched available medical literature on the toxic propensities of petroleum coke and explained from his knowledge and examined NIOSH study that the manufacture of petroleum coke is an entirely different process than the coke oven, carbon into coke, process. The petroleum coke process does not produce the same emissions as the coke oven. Dr. Cayton explained both processes and the PAHs products resulting from petroleum coke production, stating there is a tremendous amount of medical literature on PAHs. He indicated both coke oven workers and petroleum workers have been studied in many epidemiologic studies, with large groups followed for many years to see what diseases they might develop at greater frequency than would be predicted, with sufficient studies in standard toxicology and industrial medicine texts so you don't have to go to journal articles. Dr. Cayton cited to the 1965 large numbers of petroleum workers study of Sir Richard Daul, a preeminent figure in this type of research, and he gave detailed citations to at least five or six additional such well-documented papers in reputable medical literature, published from 1933 to l980 as authority for his opinions, reflected at Tr. 261-65. These publication dates are the basis of claimant's outdated argument in Post Trial Brief, which does not address these publications' contents as reflected in Dr. Cayton's testimony. While claimant in post trial argument emphasizes these publications were not produced, the record does not indicate they were requested or denied and Dr. Cayton was subject to cross examination on this testimony. No evidence has been presented to disbelieve this witness had what he said he had and considered.

It was in connection with Dr. Cayton's first general reference to information from such textbooks and literature review that he testified petroleum workers are at a greater risk for lung cancer, there's been some discussion of bladder cancer, nothing else, and that an increased incident of hematologic abnormalities including malignancies has never been reported, Tr. 236-39, a response claimant argues affects the expertise and persuasiveness of his lack of causation opinion because of Dr. Duhan's three 6/30/99 articles. However as reflected below Dr. Cayton had a well-explained basis for disagreeing with Dr. Duhan's theories based on these articles and Dr.Duhan's interpretations of them. Dr. Cayton also explained that the fact petroleum products can be carcinogenic does not lead to the conclusion it can cause another type of cancer explaining that the basic premise in modern oncology is that carcinogens are site specific, and he stated that the claimant has MDS, he does not have cancer or leukemia.

Dr. Cayton testified on direct he thought Dr. Duhan's 6/15/99 hypothesis the petroleum coke at DSC was still "off-gassing" PAHs and these caused DNA or chromosome damage resulting in his MDS was overreaching. Because, he explained on direct, MDS not leukemia had been diagnosed, MDS was seen in many other things besides leukemia, there was no good evidence of PAH exposure here, and there is strong medical literature evidence that petroleum products' exposures do not cause leukemia and MDS disorders. When in next follow up direct question he was asked what he meant by good evidence of exposure he explained PAHs are ubiquitous, e.g., in barbecued meat, so this had to be placed in the context of a true occupational exposure such as a petroleum worker who has worked in the field for many years. If that is the case then he thought it could be said there was good data

claimant had a PAH exposure. So saying however Dr. Cayton also testified in this response there was no evidence of blood abnormalities or leukemia in any of the studied people. He also testified, to next question on direct, that if it is assumed the claimant worked for many years moving petroleum coke with a bulldozer that would certainly be sufficient for him as good evidence of exposure to PAHs. Tr. 242, 241.

In post trial argument claimant claims various as aspects of Dr. Cayton's testimony were inconsistent and contradictory so as to constitute his opinions as less than substantial evidence and/or of less persuasive value than the more expert in the field, Dr. Duhan. Review of the succession of questions and answers at direct, Tr.240-243, indicates Dr. Cayton in his causation opinions gave the claimant the benefit of sufficient good evidence of PAH exposure in moving petroleum coke. However his no good evidence statements and explanation encompassing petroleum workers as distinguished from a petroleum coke worker and ubiquitous PAHs, following in the context of his several reasons given in commenting on Dr. Duhan's represented reasonable medical probability causation opinion including as to DNA/chromosome damage, Tr. 236-243, and the "sufficient years" assumption of the question at Tr. 242 does not strike as a vitiating contradiction when Dr.Cayton's overall testimony and the bases of his opinions are considered. Dr. Cayton's core rationale and supporting research for his opinions is unaffected.

Claimant in post trial argument questions why Dr. Cayton made his original statement of no good evidence of PAH exposure here, arguing PAH exposure should have been the cornerstone of Dr. Cayton's understanding and he urges this as a contradiction. However Dr. Cayton here clearly indicated claimant's many years of moving petroleum coke was sufficient good evidence for him of PAH exposure. And he testified that assuming such exposure in these claimant activities, his lack of causation opinion is based on no evidence in the literature, on the large scale studies over a protracted time period and the medical textbook authorities he reviewed on petroleum coke workers and refinery workers, that blood dyscrasia, abnormality or leukemia are caused. Dr. Cayton's opinion and testimony on this claimant was clearly based on an assumption of sufficient good evidence of PAH exposure. While claimant in argument states the "strong evidence" medical literature on which Dr. Cayton stated he relied was not produced, this aspect of his presentation was subject to cross examination, with Tr. 260-65 reflecting what transpired as to production.

Dr. Cayton on cross testified he was able to locate only one of the medical articles of Dr. Duhan's abstracts' testimony but stated that professionally, in reviewing medical research, he believed one has to be careful, it's preferable to have the full article as the abstract does not make the physician aware of the entire procedures. And as result when the full article is read, it becomes evident it is a situation of comparing apples and oranges, and he thought that was the situation as to some of Dr. Duhan's abstracts. He did not believe from his review of Dr. Duhan's abstracts that there was support for a conclusion of reasonable medical probability that claimant's DSC petroleum coke exposure accelerated, caused or aggravated his MDS.

Reasons for Recall of Medical Witnesses

During Ms. Kelsey's cross examination the MSDS for Bunker Fuel, Low Sulfur Fuel, High Sulfur Fuel Oil of RX 49 first came to light.[17] The claimant's motion to reopen the record and recall Dr. Duhan was granted, with response opportunity provided respondents. See TR. 301-17, Claimant's Brief on Evidence, Respondents' Opposition to Rebuttal.

[17] For the reasons reflected on discovery requested, responses, and witness' understanding of what was required.

This MSDS, RX 49, the Bunker Fuel MSDS, unlike the MSDS RX 41 for Petroleum Coke, has a reference to PAH, in its statement under Material Identification and Chemical Composition that this Petroleum Hydrocarbon Fuel Oil "is a complex mixture of predominently unsaturated hydrocarbons produced from the distillation of products from a thermal cracking process. This product is likely to contain polycyclic aromatic hydorcarbons (PAH)."

As reflected above, when the term "Bunker Fuel" or "bunker fuel," "Bunker Oil" of the RX 49 MSDS is used above, below and throughout this decision it encompasses all the specific contents of the Bunker Fuel, Low and High Sulfur Fuel Oil of the RX 49 MSDS. This is the only addition to the DSC petroleum coke the claimant worked with in his last nine days of 6/91 indicated or established by this record.

Dr. Duhan's Recall 6/30/99 and 8/2/99 – Including Analysis and Evaluation

Dr. Duhan testified that since 6/15/99 he had reviewed Dr. Cayton's testimony, he had received the MSDS RX 49 and he had since procured the complete medical articles he had only the abstracts of 6/15/99. He did not read the medical literature of Dr. Cayton's testimony but instead did his own literature research. According to Dr. Duhan given his knowledge from the MSDS RX 49 of the chemicals to which the claimant was exposed his approach now was not the theoretical and hypothetical approach his earlier opinions took on "the possibility of a coating on the coke." Now he had a better idea of the carcinogenic potential of the substance the claimant actually handed and used. Dr. Duhan did not in his testimony refer to or indicate he knew how much of the RX 49 MSDS chemical was actually involved in the DSC petroleum coke operations, the 10 pounds to 2000 pounds short ton of Ms. Kelsey's testimony. His meaning in his use of the term "coating" was unclear.

He testified he did a literature search on the Bunker fuel oil, low and high sulfur fuel oil, petroleum hydrocarbons C15-C36 as described on the MSDS RX 49, to see how those properties would affect the claimant and he now stated his previous 6/15/99 testimony the "coating substances 'off gas' a number of hydrocarbons ranging in their carcinogenic potential" was "hypothetical"at that time. But as noted above, Dr. Duhan's direct testimony 6/15/99 Tr. 112-150, did not refer to any "coating substance" being the reason or source of the "off gassing;" he indicated only that the petroleum coke itself "off gassed" what he opined as PAHs because a petroleum smell was reported to him. Later on 6/30/99 direct, Dr. Duhan testified that based on what he now knew of the coatings and based on three articles of his 6/30/99 testimony, the *Chu*, *Farrow* and *Nisse* articles described within, the abstracts of which he referred to in his 6/15/99 testimony, exposure to the "coating" on the petroleum coke in itself would suffice as a causative factor and make it more probable the claimant would get MDS. And exposure to diesel exhaust increased the risk factor, which Dr. Duhan testified he didn't know until he read these articles on hematological affects of diesel exposure. Tr. 435. It is noted Dr. Duhan's 2/99 report did not refer to diseal fumes exposure, nor did his 6/15/99 testimony. He also indicated that he thought an opinion there had never been any relationship proven between petroleum products and MSD may have been based on outdated information. Tr. 436.

Dr. Duhan now testified that speaking generally from his literature search fuel oil with a substantial number of lower carcinogenic compounds was more highly carcinogenic than the number six fuel cited in an article he stated he previously submitted, not identifying this article by title 6/30/99, but stating this comment was a response to Dr. Cayton's statement about slight specificity. He then said he found these three articles [*Chu*, *Farrow* and *Nisse*] specifically related petrol chemical[18] to the

[18] As reflected below this record in total indicates " a petrochemical" is a very generalized term. Although not defined it appears to refer to the petroleum industry and its products. As a generalized term/description, it is noted it is not specific to the RX 50 petroleum coke and Bunker Fuel Oil of RX 49, although these are among petrochemicals. Since the evidence in total indicates preciseness and specificity as to product exposed to is of

development of MSD and he testified these, with a general epidemiological approach support his causation conclusion. He was then asked on direct about how the MSDS RX 49 properties work to produce the carcinogenic effect. At this point Dr. Duhan again referred as he did 6/15/99, to the coke petroleum product as being taken from raw coal. And in this response he indicated that the hydrocarbons stripped off were classified into three separate groups of light distillate, medium distillate and heavy distillate, and from his research the fuel oil, a tar-like substance, that is usually used to coat the coke contains the medium and heavy distillates, the heavy distillate potentially most carcinogenic. In evaluation it is noted Dr. Duhan did not at this point and in these statements state that in his "usually used" and "fuel" references he was here indicating this is what RX 49 reflected was used at DSC. Tr. 419-20. RX 49 does reflect that "heavy thermal cracked distillate" is the chemical name and synonym for the product. RX 49 also indicates the Bunker Oil is a petroleum hydrocarbon, not a coal product.

It was at this point on direct that Dr. Duhan again, as it bears on persuasive value for the fact finder, reflected he understood petroleum coke to be dried out coal with the hydrocarbons stripped by heating. Petroleum coke is a relatively benign substance he said which he indicated is what the petroleum coke MSDS reflected, a benign substance. But it could "off gas" some, a small amount of potential carcinoginics, but it was still a relatively benign substance. See also cross at DTR 20. However as this testimony was heard the fact finder noted that in his 2/97 report, where he had and considered a petroleum coke MSDS, Dr. Duhan concluded a toxic exposure based on this relatively benign substance exposure. The 2/97 report reflects no assumption as to any other substances he considered in expressing this opinion and to the extent Dr. Duhan indicated his opinion was based on any unstated, unshared, factual assumptions or theories he had, as heard in person and on overall review of the conflicting experts' testimony to decision here, it detracts significantly from his opinions overall and their probative and persuasive value and credibility. Dr. Duhan had in testimony agreed it was very important to know exactly what a patient was exposed to in assessing whether such exposure caused a
particular disease.

Dr. Duhan's later cross examination on recall indicated his direct testimony as to "coating" coke with petroleum products for spontaneous combustion purposes was based on his understanding from textbooks that this applied to metallurgic coke, produced by coal and used to produce steel. And it would appear his stated information as to coke coating substances which are known carcinogens which "off gas" and would kill people is based on the coal into coke production process.

Dr. Duhan in stating petroleum coke is coke that has had the tar added back on to coat the coke so it does not spontaneously combust,[19] indicated he had an article that talked about a mixture of middle and heavy distillates used for such purpose, like a tar. He had literature, the *Chu* article, which indicated there was some risk to people who worked with those distillates for mild dysplasia leading to leukemia, which he thought was the distance between his and Dr. Cayton's testimony.

According to Dr. Duhan, **The Journal of Applied Toxicology** is "an accepted journal," is "more of an academic Journal," is "more highly regarded" and "would" be subject to peer review. In it the 1994 article "The Toxicology of Coal Liquefaction Products, an Overview," one of the articles on which he relied was published, otherwise referred to within as the *Chu* article.

---

special importance in a case involving the chemicals here, in analyzing and evaluating questions asked and answered including as to weight, this is a factor considered.

[19] Employer post trial argues the higher MSDS flammable rating for Bunker Fuel Oil RX 49 as compared to such rating for the Petroleum Coke RX 41,50,indicates Dr. Duhan was misinformed as to the Petroleum Coke's flammability and the Bunker Fuel Oil's purpose which reflects on Dr. Duhan's logic here as a man of science.

Dr. Duhan indicated the *Chu* article was based on animal studies and it told him that if the claimant was exposed to Bunker oil, based on the information Dr. Duhan had as to what makes up Bunker oil, he then believed that would have contained a substantial amount of fairly significant carcinogens. Dr. Duhan did not cite in his statement here the MSDS RX 49 "heavy thermal cracked distillate" as the basis of his information as to what makes up bunker oil, but rather he quoted the consistency of the fuel oil middle and heavy distillate blend of the *Chu* article (cite at Tr. 426). Also Dr. Duhan did not here, in expressing "substantial amounts," make any reference to the mixture blend amounts of Ms. Kelsey's testimony or the blend mixture amounts set forth in the *Chu* article quote. Tr. 425-29.

It was then, when asked on direct whether this article told him anything about whether those carcincinogens could cause the claimant's MDS that he responded by quoting from *Chu*, "repeated exposures to coal liquefaction products produces a broad rang of systemic effect. Among them, growth suppression, anaemia , leukocytosis and other hematological disorder are most prominent. Bone marrow ... are the target organs affected... ," CX 8, indicating this language supports his feeling that he had literature support "that these compounds are myelotoxic, affecting specifically the bone marrow." Tr. 428-30. However the fact finder notes the reviewed *Chu* article is on the coal liquefaction process, from pulverized coal as there described. Further, when on direct it was pointed out to Dr. Duhan he had not on 6/15/99 been asked about petroleum distillates but petroleum coke, in his characterization here again of his 6/15/99 unstated and undisclosed beliefs of a factual nature as a "theoretical understanding"of "coating" substances used, the self-serving manner in which he here explained his factual 6/15/99 omissions, with his 6/15/99 omissions, reinforced fact finder uneasiness. Particularly since he did not indicate the fuel blend distillate of the *Chu* article was the MSDS 49 Bunker Fuel, and what is in reviewed *Chu* does not appear to indicate such, since the process and substance differ. The fact finder was mindful of this impression when later hearing and in weighing Dr. Duhan's "stretch[ed]" "analogy" testimony, in connection with his use of the *Farrow* article to support his opinions, where he referred to and dealt with lower and higher hydrocarbons, since only C15-C36 hydrocarbons are reflected in the MSDS RX 49 chemical formula, DTX 48-55, Tr. 418-21; and whether this "analogy" theory was persuasive rationale as to RX 49. Dr. Duhan's chemical experience with petroleum hydrocarbons is not specifically set forth in his qualifications and, other than catacarb, he was not specific in setting forth just what his toxicology studies/experience were and how it relates to the substances in question here. Tr. 124-28. Only with reference to the catalyst catacarb chemicals was he specific, also indicating it was not exactly the product here and his toxicology experience generalizations, absent specifics bearing on this case, do not add weight to his opinions.

Dr. Duhan then went on to describe the other articles and studies upon which he has based his opinions and he cited for the Court's information a 1989 article published in **Leukemia**, "a fairly well-recognized Journal of hematology, entitled "**Myelodysplasia Chemical Exposure and Other Environmental Factors**," by *Farrow*, A. Jacobs, R. R. West, an epidemiologic study which "studied the development of myelodysplastic syndrome, following the exposure to petrol, diesel and fumes." (TR 430-435) Epidemiological studies can be done both prospectively and retrospectively: prospectively by taking a group of workers with known exposure to a chemical and studying them for the balance of their lives, to determine what they develop, a case control study; or a retrospective case control study where patients with a known disease are studied to try to determine what they have been exposed to, and *Farrow* looked at MDS patients and asked them questions as to what they had been exposed to. CTX 25-27.

The experts' testimony and the *Farrow* article itself indicates that one of the *Farrow* study's purposes was to determine an appropriate methodology for gathering information, with an indication at one point in the study that "there were only small differences in lifetime occupations held by cases and controls." Dr. Duhan indicated 63 patients were in this *Farrow* small English 1986 case control study

published in 1989 and on review occurring over one year.[20] Dr. Duhan thought if the claimant was exposed to large amounts of petrol and diesel fumes in his "Cat" work, and Dr. Duhan assumed for purposes of his reliance on *Farrow* a large amount of such exposure, with the exhaust fumes containing a large number of chemicals in addition to benzene and toluene and many carcinogenic constituents, he thought the claimant on a combination of materials handled was in an epidemiological group similar to this study. On cross examination Dr. Duhan indicated that since English petrol of the *Farrow* article refers to gasoline as opposed to fuel oil this article was describing exposure to gas of the diesel type and non diesel type and he could not say from the article itself rather than from data which would have to be obtained from the original researchers whether this study isolated for the difference between the types of diesel and petrol fumes' exposure in England and the type of petroleum products claimant was exposed to here. When asked on cross whether *Farrow* isolated for exposure to Bunker Oil Dr. Duhan did not respond directly but referred to the *Chu* statements as to distillates in the coal liquefaction process. DTX 31-32.

Dr. Duhan also based his opinions on causality on a 1995 article, also published in **Leukemia**, entitled "**Exposure to Occupational end Environmental Factors in Myelodysplastic Syndromes, Preliminary Results of a Case Study, Case Control Study**," by *Nisse,* et al**,** wherein the group stated (TR 436-437):

> In conclusion, these preliminary reports suggest, as (do) reports of Farrow, et al., and Goldberg, et al., a possible link between exposure to some chemicals and myelodysplastic syndrome. In spite of preventive measures, benzene and other expected substances, including aromatic polycyclic hydrocarbons contained in exhaust gasses (sic) and petrol derivatives could be incriminating in some cases.....Final results of this case control analysis should contribute to the answer this question."

Dr. Duhan testified the conclusions of this *Nisse* preliminary study are a little weaker, more tenuous, a suggestion, although on direct he indicated this article represented a new evolving line of thinking and he thought Dr. Cayton testified to the thinking ten years ago.[21] On cross he testified that changes in medical textbooks and MSDSs to update information as to what products cause in the human body occur when there is an established 2:1 ratio of patients exposed to a particular substance versus patients in the general population, which brings greater-than-chance into the medical probability realm in risk analysis. [The implication is that neither *Farrow* nor *Nisse* would meet this standard.]

He agreed that from the *Nisse* article information it cannot be determined whether in this French study they were studying gasoline versus bunker fuel oil, low sulfur fuel oil and high sulfur fuel oil, DTR 32, after his deflected answer at DTX 31-32. However when asked if he found any studies where petroleum refinery workers, whom it would appear important to look at for petroleum products' human detrimental effects, were studied for the likely development of MDS Dr. Duhan indicated that in the past he may have or did look at articles on petroleum refinery workers, but testified he did not do so for this case because he came up with the articles referring to the specific chemicals claimant was exposed to. It is noted on analysis petroleum refinery workers were the subjects of some of the articles on which Dr. Cayton testified he relied for his opinions, an opinion characterized as outdated by Dr. Duhan and one of the bases on which Claimant argues post trial depreciating the persuasive value of Dr. Cayton's causation opinions.

---

[20] Not the ten years claimant argues.

[21] See Dr. Duhan's cross at DTR 13-17 on this outdatedness testimony.

Dr. Duhan in his testimony on the *Nisse* and *Chu* articles indicated that he did not have the specific petroleum products of these studies as he was not asked for this, and he did not state they were the particular products which are the subject of claimant's DSC exposure. He indicated any such information possibly embedded in the spectrum of jobs these articles referred to may be obtainable from both Drs. Nisse and Farrow. On redirect he testified that notwithstanding the absence of the MSDS substances from any citation in the *Farrow* article he thought it was not a far stretch to assume that among its 70 substances were probably toxic substances like benzene and he stated he analogized the Bunker oil the claimant was exposed to at RX 49 was among the *Farrow* substances although not cited there.

He also indicated he found no other studies performed in the US indicating a cause and effect relationship between petroleum products' exposure and MDS, he had submitted all the relevant articles he found. He stated the three articles of his 6/30/99 testimony were the most recent articles he found supporting his theory the MSDS products caused claimant's MDS. He generally looks at more recent articles, so he could not say these three were all the supportive published articles.

On redirect Dr.Duhan testified that considering all his research and the new information as to the RX 49 material added to the petroleum coke, he thought to a reasonable degree of medical probability it was causative or at least contributory in the claimant's MDS, as were the pesticides and fertilizers of his study which he used to support his analogy.

Further Evaluation

As reflected above neither Dr. Duhan's written 2/99 report nor his direct testimony 6/15/99 indicates any such statements as to this "coating" theory or "coating" assumptions as the factual foundation for causation opinions expressed at those times and the above summary reflects just how this information developed after his 6/15/99 direct presentation during the course of cross examination. The fact it later turned out that the RX 49 substance was used does not serve to enhance the probative or persuasive value of an expert who does not disclose the factual basis of his assumptions and theories, and presents his opinions in the selective manner reflected here.Tr. 429.

In analyzing Dr. Duhan's direct 6/30/99 testimony at Tr. 425-430, it would appear it was imprecise and unclear at times as to whether in the questions' "fuel oil" references and his answers, whether "fuel oil" or the Bunker oil of RX 49 was meant. It appears to the fact finder from *Chu* as well as the record references to "fuel oil," although that term is not defined and explained, that the term "fuel oil" can mean different things, and there are different kinds of fuel oil. Without precision and with a lack of clarity as to whether RX 49 is the subject of question and answer, it appears some of Dr. Duhan's fuel oil references may be to the general fuel oil term, affecting probative and persuasive weight. An echo of Dr. Duhan's coal-coke references to the metallurgy industry; invoking Dr. Cayton's apples and oranges comments, and raising questions as to whether the same things are being compared and discussed. *Chu* from examination clearly is coke liquefaction from coal, and this process' particular distillates, not petroleum coke or petroleum liquefaction.

Then, though the fact finder is a layman (but see Dr. Duhan's invitation to the fact finder at Tr. 430) it would appear that volumes are a factor for an expert's consideration, and it would appear Dr. Duhan did not have this information.

Dr. Duhan testimony on cross as to a 7:1 ratio of articles opposing a large petroleum industry study indicating that petroleum products' exposure does not have deleterious health effects, and his reference to this industry study as less than credible, is not considered of weight absent full expert explained particulars from the specific articles alluded to in such general fashion. Rather it is the facts in

this particular case, and what the respective experts' specify are the particular medical research basis of their opinion which carry weight. DTX 40-46.

Dr. Duhan's redirect indicated petrol contained benzene up to seven to eight years ago, which would date earlier than the nine day period at issue, and Dr. Cayton testified benzene has been heavily regulated for twenty years. DTX 48. This would date any such exposures back to earlier than 6/91, with other potentially injurious claimant exposures in between.

Dr. Cayton Recalled – Analysis/Evaluation

Dr. Cayton on review of the MSDS on petroleum coke EX 50, the MSDS on the bunker fuel oil of EX 49, his own and Dr. Duhan's earlier testimony, and on review of the articles of Dr. Duhan's 6/30/99 testimony stated his opinion it was not reasonably medical probable that claimant's exposure to the petroleum coke at DSC caused, aggravated or accelerated, or hastened the development of his MDS, and on similar basis opined that the bunker oil sprayed on the DSC petroleum coke did not cause, aggravate, accelerate or hasten his MDS's development. He also expressed the opinion that it was not medically probable that exposure to exhaust fumes at DSC so affected his MDS.

Dr. Cayton who had reviewed the RX 49 MSDS on direct disagreed with Dr. Duhan's 6/30/99 explanation of petroleum coke given in connection with a question Dr. Duhan was asked by claimant's counsel: whether "the petroleum coke would then be a lighter distillate." Tr. 320-21.To the fact finder, claimant's counsel assumably meant by this 6/30/99 question to Dr. Duhan, with the bunker oil added although this is not entirely clear from the question as asked. But Dr. Cayton then disagreed absolutely with Dr. Duhan's testimony the coating substance is a tar-like substance, reflected at Tr. 420. (See Dr. Duhan's Tr. 419:20- 420: 22 earlier indication the coke petroleum product was taken from raw coal which has itself three separate groups of distillate hydrocarbons, light, medium and heavy. See also through Tr.423.) On direct under objection, Dr. Cayton also disagreed with Dr. Duhan that the oil sprayed on the DSC petroleum coke contained middle and heavy distillates. CTX 11-13. Later on cross examination Dr. Cayton described bunker fuel as a hydrocarbon that is somewhat viscous in terms of feel and it is sprayed on the petroleum coke as a dust suppressant. He testified it is not the same as Fuel Oil number six which Dr. Duhan referred to in his testimony. CTX 72-3.[22]

Dr. Cayton explained there is no suggestion in the Bunker Oil MSDS that the bunker oil contains benzene, or that it is marrow toxic or a carcinogenic and it was important to understand the only non-therapeutic drug chemical clearly identified as toxic to the bone marrow was benzene. And he stated there is no significant evidence that diesel fuel or bunker oil causes MDS. In his opinion, the *Chu, Farrow* and *Nisse* articles do not to a reasonable degree of medical probability show that the RX 49 bunker oil causes MDS. Claimant in argument faults these statements of Dr. Cayton on this MSDS which are, on review of this MSDS at RX 49, a correct reflections of what is not in the MSDS at RX 49. Claimant in post trial argument uses Dr. Cayton's statement then made, that this does not mean because only one, benzene, has been identified, it is not possible there are other causing chemicals, it means only what the state of the medical art is as to MDS, to depreciate the persuasive

[22] Dr. Cayton was then asked (cross examination questions at CTX. 73-74) whether the oil, and it is unclear whether the preceding Fuel Oil Number Six or whether Bunker Fuel Oil was meant in this question at this point, has "cat cracked clarified oil" in it. He responded yes and explained all "cat cracked clarified oil" means is part of the constituent has been heated in a cracker. He was then asked whether the tests in laboratory animals had found "cat cracked clarified oil" caused anemia or skin cancer and in response Dr. Cayton asked to see what in the articles was being referred to since markedly different conclusions had been drawn from the *Chu, Farrow* and *Nisse* articles discussed. This was not further pursued by claimant.

value of Dr. Cayton's opinions overall. Rather the fact finder's view is that this reflects an objective, fair-minded statement by Dr. Cayton.

Further, claimant's arguments as to confusion and being unsure as to which study Dr. Cayton was referring strike as unfair and an attempt to obfusticate the contents and thrust of Dr. Cayton's presentation on the specifics of the articles.

Dr. Cayton first explained the structure of the *Farrow* article was not really to show that bunker oil caused MDS but it was trying to show whether a certain statistical way of looking at a problem could be helpful, and it indicates that studies using job titles in search of possible etiological exploration of chronic disease, while convenient and easy, are not necessarily helpful. This article's researchers were trying to determine, and to get at, what chemical exposure a person gets. Dr. Cayton secondly stated this article's findings and their suggestion of a possible relationship is incredibly tentative and barely reaches the level of possibility much less probability. In discussing and explaining this *Farrow* **Myelodysplasia, Chemical Exposure, and Other Environmental Factors** article Dr. Cayton quoted and cited this article's conclusion paragraph in considering Dr. Duhan's testimony on *Farrow*, and this and Dr. Cayton's detailed direct testimony as to the specifics of this medical article clearly reflect this is the *Farrow* article not the *Chu* article he was discussing and explaining. Claimant in argument faults Dr. Cayton, apparently on the basis of confusion or inconsistency, for misnaming or calling the author of one of Dr. Duhan's three articles[23], *Chu, Farrow* and *Nisse*, by the surname of the other article's author, including on cross examination. Dr. Cayton indicated when brought to his attention he misspoke the surname. CTX 35-37. It is very clear from this expert's testimony as to the specifics of what article he was discussing and in view of what actually transpired, this discounting argument is not of any weight. Further in reviewing Dr. Cayton's explanation and opinion on this **Myelodysplasia, Chemical Exposures, and Other Environmental Factors**, *Farrow* article, against the specifics of the full article, Dr. Cayton's opinion is persuasive. Dr. Duhan's is less probative. See also CTX 45-46.

In discussing the specific contents of the *Chu*, **Toxicology of Coal Liquefaction**, animal studies article at CXT 8-10, Dr. Cayton testified that while animal studies can be helpful it is very dangerous to extrapolate from them and secondly, the **Toxicology** article's conclusions as expressed are very tentative. Review of the full article, including its footnotes which make it a metastudy according to Dr. Duhan, would indicate to the the fact finder that Dr. Cayton's explained statements on this article are not without a reasonable basis.

Dr. Cayton pointed out that **Coal Liquefaction** studied coal liquification, and it is about a different and a chemical process claimant had no exposure to. At CTX 38 on cross Dr. Cayton further explained the process that was studied in the four pilot plants of the *Chu* article in connection with explaining the quality of the tentativeness he attributed to the results of animal studies based on these four coal liquefaction plants and the question of whether this article could say anything definite applicable to humans. In next question posed in cross on this article Dr. Cayton reiterated *Chu* is about coal liquefaction, not petroleum coke or a process claimant was exposed to. CTX 38. Counsel then went on to describe what he characterized in question posed as the "real culprit" of the *Chu* **Toxicology** article, PAHs, as talked about in the *Farrow* article. Dr. Cayton after first referring responsively to the specifics of the *Chu* article's last paragraph conclusion at "Summary and Conclusion," agreed the statements were expressing a concern because of the effects of PAHs. But, Dr. Cayton indicated at CTX 39, the carcinogenic effects of PAHs, including lung cancer, specifically

---

[23] The three articles on which Dr. Duhan relied in his recalled 8/2/99 post hearing deposition. The articles of his 6/15/99 testimony were not relied on by Dr. Duhan when recalled 8/2/99.

expressed within the "Human Health Risks" section of *Chu*, **Toxicology of Coal Liquefaction,** which immediately preceded this article's conclusion. And he indicated that its further reference in this section to other organ systems including the blood which may be affected, as expressed, was a possibility. On review of the *Chu* article in its entirety, as well as the specifics of all the paragraphs of both the "Human Health Risks" and "Summary and Conclusion" sections of this article, Dr. Cayton's cross examination responses impressed the fact finder as well founded in the article's contents and language, and in his answers he well-handled cross examination. CTX 39-45.

While claimant argues the *Chu* article, which commented on products derived from coal liquefacation as supportive, and Dr. Duhan in discussing this article urged this article's references to light, medium and heavy "distillate" played a part in his causation opinion, the record does not by any persuasive professional opinion explain or establish that what the Chemical Name of the Bunker Oil of MSDS RX 49 is: "Heavy Thermal Cracked Distillate," is a substance within the contents of this article. Moreover RX 49 states this Bunker Oil is of the Petroleum Hydrocarbon Family. What the record does evidence through the testimony of Dr. Cayton who more fully explained both the refining and production processes to which coal into coke is subject and the crude oil into petroleum coke process and their many other by-products, is that these different processes produce a variety of distillates, distillates which by this word "distillate" can mean many different things and are of varying chemical consistencies. Like the word "petrochemical" used at various points in the experts' testimony and their questioning, it would appear, absent expert explanation directed to the specific MSDS products involved in this causation case, that a "distillate" whether of fuel oil or any refining/manufacturing process including coal into coke and coal into liquified coal and crude oil into petroleum coke is a general term dependent on specifics for its composition. And dependent on the process assumably.

The transcript indicates Dr. Cayton agreed to, and the cross question as asked was as to whether the *Farrow* **Myelodysplasia** article indicated the MDS patients reflected more exposure to petrochemical or petroleum products than diesel fumes or liquids.[24] Since the *Farrow* article's "Discussion" language used at this point in questioning, and the subject of questioning indicates "The principal chemical association found in this pilot study was the MDS patients reported more exposure to petrol and diesel fumes or liquids. Much of the exposure was associated with jobs in the transport industry," CX 8:6, this *Farrow* statement is no doubt the question's intent. This was in fact the language claimant's counsel screened out and isolated from the *Farrow* "Discussion" section and used in his cross examination questioning of Dr. Cayton on the article's "Discussion." CTX 47-53. But *Farrow* goes on to say the petrol and diesel fumes and exhausts from the engines contained benzene, toluene, as well as a large number of chemicals. Dr. Cayton pointed out the "Discussion's" further and concluding statements for his opinion the *Farrow* study found a lot of very tentative things that do not reach the point of probability, that the study is preliminary and does not prove anything:

> In view of the method of collecting the information it is best suited to patients who are well enough to tolerate lengthy interview. The results justify further study of reliability and validity of the method with respect to patient recall. Although the numbers involved are small and, as a consequence, few statistically significant associations were noted, there was a consistent finding of more exposure and higher exposure among cases. It seems appropriate to study a larger number of MDS patients by these methods to explore past exposure histories more fully. *Farrow* at CX 8:6

---

[24] And to fertilizers, smoking variation, coal mines and a variety of things, Cayton added.

Dr. Cayton pointed out that retrospective case control studies like the *Nisse* study like such studies in asbestos literature are not without their effectiveness sometimes. But what such studies ask about is possible chemical exposures retrospectively, and this approach can be difficult in identifying exposures correctly. The *Nisse* article did not study the type of bunker oil used at DSC and did not study anything specifically, an observation Cayton made as to all three articles, *Chu*, *Nisse* and *Farrow*, on which Dr. Durhan relies for his literature support. Moreover Dr. Cayton testified the *Nisse* conclusions, very speculative and preliminary, were not anything more than a suggestion there may be possible relationship between MDS and exposures, and it was not proper to rely on a suggestion in terms of reasonable medical probability. After reviewing these three articles he stated he would not consider them to be a significant new development in understanding MDS's cause and he did not believe these studies will be cited in a single text. He stated for Dr. Duhan to find only three articles in the huge world literature does not say much about the possible likelihood MDS is caused by chemicals other than benzene.

While claimant argues Dr. Cayton's responses on *Nisse* at CTX 56.3, 56.9. "seems to be a contradiction" somehow depreciating the weight of his opinions, these statements in context and given the total import of Dr. Cayton's testimony and explanations in this area do not appear so, or support claimant's view/contentions. His expressed statements, when so measured, as to the use of case control studies where the disease is rare are not without understanding and meaning.

One of Claimant's arguments as to why based on Dr. Duhan's superior expertise, Dr. Duhan and not Dr. Cayton should persuade is that Dr. Cayton thought he worked at a coke plant.[25] This is an unbelievable reading and appreciation of Dr. Cayton's clear knowledge as to the kind of DSC work operations/substance claimant was involved in which is the subject of his exposure. This argument, viewed against what Dr. Duhan's testimony indicates he did not understand/appreciate about coal-coke and petroleum coke operations/exposure including the substance differences, and/or he confusingly expressed, does not enhance claimant's position. It is a misleading argument when viewed against each expert's specific statements in totality.

While on cross Dr. Cayton testified he misspoke when he testified there was no good evidence claimant was exposed to PAHs because the bunker oil contains some PAHs, and claimant in post trial argument faults Dr. Cayton for this, the fact is that when Dr. Cayton, and Dr. Duhan, testified, prior to Ms. Kelsey's testimony, there was no evidence by the MSDS for petroleum coke, RX 41, or by any other evidence in this record, that there were PAHs in this claimant's DSC work exposure, or that he was exposed to anything but petroleum coke at DSC. All the claimant and his witnesses knew, and all he related to the two evaluators here, Drs. Duhan and Cayton, was petroleum coke exposure. One of the reasons for fact finder discounting of Dr. Duhan's opinion is that until he was questioned on cross examination and throughout his direct presentation he nowhere indicated that his theory relied on and interpolated an unstated, unshared factual belief there was something added to the petroleum coke of the RX 41 MSDS, something not reflected in either his 2/99 causation report or his direct testimony, affecting his testimony's "backbone," as self described Tr. 417.

Claimant attempts at CTX 34, through reference to Dr. Cayton's Tr. 274:5 testimony to fault. However it is clear from Dr. Cayton complete 6/16/99 testimony at Tr. 272-275 that Dr. Cayton's was referring to no history of an unusual or extreme exposure, such as an evacuation with a gas leak.

Further Evaluation Circulatory Claim Conclusions of Law

---

[25] Claimant's Post Trial Brief's page 26:18-20, is assumably a reference to Tr. 235:10, rather than Brief's cited Tr.223.12.

This Administrative Law Judge, in arriving at a decision in this matter on each of the unscheduled claims, is entitled to determine the credibility of the witnesses, to weigh the evidence and draw his own inferences from it, and he is not bound to accept the opinion or theory of any particular medical examiner. **Banks v. Chicago Grain Trimmers Association, Inc.**, 390 U.S. 459 (1968), **reh. denied**, 391 U.S. 929 (1969); 78).

All that is required of a claimant to establish the elements of his **prima facie** case is that he adduce some evidence tending to establish each element. Maher Terminals v. Director, OWCP, 992 F. 2d 1277, 3rd Cir., Director, OWCP v. Greenwich Collieries supra.

Claimant's testimony described his exposure to a smell/aroma of petroleum in his 6/91 petroleum coke work, also reflected by Messrs. Frey and Leonis, and by the 2/99 report of Dr. Adam Duhan and his testimony claimant adduced evidence tending to establish such exposure could have caused his MDS so as to invoke the presumption. The Claimant presented some evidence as to his diesel fumes exposure from the Cats during this period, and Dr. Duhan's testimony is evidence adduced tending to establish such caused his MDS so as to invoke §20(a).

Substantial evidence is such evidence as a reasonable mind might accept as adequate to support a conclusion. The substantial evidence required to rebut the §20 (a) presumption is not a preponderance of the evidence but employer's evidence must be sufficient to support findings that specifically and comprehensively sever the potential connection between the disability and the work environment. **Parsons**, supra. In the case at bar, the Employer by Dr. Cayton's opinions including his consideration of the contents of the MSDSs at RX 49, 50, has offered substantial evidence rebutting the statutory presumptions in Claimant's favor. Accordingly, the presumptions fall out of the case, do not control the result and all of the record evidence has to be weighed and evaluated to determine if the claimant has met his burden of persuasion.

Claimant relies heavily on Dr. Duhan's superior expertise in toxicology and occupational medicine over Dr. Duhan's professional qualifications in arguing he is more persuasive, his opinions more probative.

The presented evidence, as heard and on analysis, indicates that the information as to petrochemicals as well as on the coke manufacturing process, from crude oil to petroleum coke as well as on the carbon coke process, with their various by-products and distillates represents a highly technical, complex and diverse subject. The record also indicates that the subject of fuel oil, whether from petroleum hydrocarbons such as RX 49 describes, or one of the many other fuel oils mentioned during the course of the proceeding, e.g., number six fuel oil, marine fuel oil, medium, light, heavy fuel oil, is similarly diverse, technical, complex and specific to the particular product and manufacturing or refining process. Review of this record in total indicates that the term petrochemical or petrochemicals is a very generalized term. Although not defined, it appears to refer to the petroleum industry and its products, but it has no specificity for the particular averred injurious substances here, the DSC petroleum coke and Bunker Fuel Oil of RX 49, 50, although these products are within this generalized petrochemical term. This appears a reasonable inference from the presented evidence in total unless expert testimony indicates otherwise, which it does not here. Further considering the experts' testimony and the articles submitted it appears that the crude oil into petroleum industry, the refining of petroleum and the products of refining petroleum into various by-products, including the petroleum coke and Bunker Fuel Oil which are the subject of this claim and exposure, as well as into other by-products, are complex chemical and production processes, differing as to each. Many different kinds and components of petrochemicals can result, it would appear. It involves various levels of petroleum hydrocarbons and various distillates which may or may not be generalized in the fuel oil term. It would appear experts' opinions and judgments require a foundation knowledge as to the complexities of the

exposure product's contents, and their process It would also appear that coke production from carbon coke, coke oven production from carbon coal, and coal liquefaction from coal as set out in *Chu* are similarly processes that involve chemically complex substances/products and by-products that can be the subject of deleterious exposures depending on amounts and compositions. The record would also indicate that there are acceptable and unacceptable levels of PAHs which can be a component of both coal processing and the crude oil into petroleum substances.

So it would appear that the information and opinions experts offer on the specific exposure products which are here contended the basis in some way of MDS causation or contribution, its hastening, aggravation, acceleration or exacerbation, should in foundation be precise to the particular product and substance at issue, here the RX 50 petroleum coke and the RX 49 Bunker Fuel. In analyzing and evaluating questions asked and answered as to weight, this has been a factor for consideration since as the record implies and indicates, and as it did when the experts' in-person testimony evolved with their medical literature: there is significance and importance to preciseness and specificity as to the exposure products in a case involving the chemicals here, and the MDS at issue. Reliability and persuasiveness of opinions are affected by a need for preciseness of understanding/knowledge of the different chemical/production processes which are the foundation for the expressed statements/opinions. Thus the above summaries of the two experts' testimony reflects analysis and evaluation of the various opinions they respectively set forth on what is known about MDS and what has been researched and published in the area of possible MDS causes.

It was on analyzing what the experts respectively testified, particularly Dr. Duhan since it was represented and argued his opinions, given his credentials, should determine persuasive weight, and because of the reservations/impressions set out above created by his testimony/opinions, and as it became clear that petrochemical exposures are complex and diverse and the RXs 45, 50, exposure substances are specific products to be addressed, that Dr. Duhan's stated background and experience in toxicology/occupational medicine was reviewed and considered. To appreciate its bearing on the specific substances and processes at issue here and the toxicology questions they raise, as it would appear a stated expertise in the area of toxocology and occupational medicine is a statement referable to an area wide and general in nature.

Dr. Duhan's CV indicates he has been a physician since 198l and other than its statement he has been trained in environmental medicine and is Board eligible in occupational medicine it does not indicate any specific training or experience in or which would bear on the effects of petroleum coke or the bunker fuel oil of RX 50, 49, or a similar substance/product, nor does it in statements reflect petrochemical experience. Dr. Duhan's testimony alone more fully explained his experience.

While Dr. Duhan referred to experience in occupational medicine and toxicology did not describe with particularity what this experience was as it applies to the specific substances in this case. When asked in connection with his CV, whether he had opportunity to specially investigate toxicology or its issues he indicated he did so in a quarter of his practice and he frequently lectured on toxicology and environmental issues, but he gave no specifics for these generalizations, or specifics which would relate to the medical/medical research issues here, or to the petroleum coke or the chemicals involved in the processing of petroleum coke when refined or after refined in connection with its handling. He indicated he was over a two year period the director of a Crockett CA clinic set up by the community and Unocal Refinery in connection with a petroleum refinery release of a cloud of catacarb (Tr. 125), to evaluate toxicological and psychological effects, and his clinic's documentation went to case settlement. But he indicated the substances there involved were not exactly the substances here, "but they are similar" [benadium (phonetic)...hydrogen sulfide], and he "learned an enormous amount about the effects of petrochemicals which would be relevant to this case in particular." How these named substances relate to the RX 49, 50 exposure substances here was not further explained, and what he

learned about petrochemicals from this Clinic experience which would relate to this case was not indicated as his testimony evolved where he referred to petrochemicals from coal at various points in his testimony noted above in summary. His CV does not indicate any further toxicology references beyond what he generalized in testimony as to his practice. He did not indicate the training/experience of the ten physicians he hired for this Clinic, he did not describe the nature of the Clinic study which appears to be the only study he was involved in, and in initially describing his practice in toxocology and lectures on toxocology and environmental issues he did not specify the toxics he was involved in in these activities, or state petroleum coke or the Bunker Fuel Oil of this claim was a subject of such.

It may be his Clinic experience constituted a large measure of his Board eligibility qualifications, but specific experience bearing on the exposures here is limited in testimony and CV. While he testified he has completed the requirement to sit for the Board in occupational medicine, and that puts him Board eligible for the toxicology boards which is a part of occupational medicine, as of hearing he had not taken the Board and was not Board certified in either and he did not specify in CV or testimony what experience/training resulted in his eligibility or what area of toxicology, which the record indicates can be a large field, his subjects, courses or training lie. While PAHs affect firefighters, a subject of ten percent of Duhan's practice as he reflected his qualifications in this matter, Dr. Cayton indicated PAHs are a subject of lung cancer concern and he was knowledgable as to PAHs and literature on such. Dr. Duhan's CV while reflecting he was an Associate Clinical Professor of Medicine at UC at some undated point, does not reflect any specific toxicology/occupational disease credentials or training beyond what he testified to in somewhat unspecific manner.

He did not indicate he had experience with a petroleum coke worker exposure such as the basis of the claim here. While he thought he had seen four or five MDS cases in his forensic practice, he did not indicate the circumstances of exposure in these cases. Tr. 120-28. Dr. Cayton gave detailed specifics as to the type and circumstances of the petroleum products exposure in the MDS case he had evaluated . It was against this stated expertise that Dr. Duhan's initial testimony was heard and viewed. The fact this witness, Board eligible but not Board certified, with his stated experience would amalgamate/confuse and not distinguish the carbon coke and petroleum coke exposures and processes gave pause, as did his testimony in total for the various reasons indicated on evaluation above. His self-described intent at one point to be vague and ambiguous was of note.

While Dr. Duhan later testified he had more than a fleeting familiarity with petroleum products and, he said, to the three different levels of the distillates of the RX 49, and about a week before his 8/2/99 testimony he had three other cases dealing with exposure to light, medium and heavy weight fuel oils, he did not indicate that he had specific experience with the Bunker Fuel Oil of RX 49. And while he testified he has cases practically every month dealing with petroleum products exposure, DTR 4-8, and had worked with the oil industry and the Crockett community in the Good Neighbor Program at the Crockett refinery his testimony as to either experience did not indicate that it involved the substances at issue in this claim including the Bunker Fuel Oil. Overall it appears there are many types of petroleum products, distillate products, products that involve PAHs which may be acceptable or non acceptable in PAH amounts. Given all the reasons detailed above for expressing reservations as to various aspects of Dr. Duhan's testimony and opinions the claimant's argument that Dr. Duhan's experience and Board eligibility should carry persuasive weight over Dr. Cayton's opinions does not convince the fact finder when the specifics of this particular record and their testimony is weighed.

When considering the testimony of the two witnesses overall it does not appear claimant's arguments based on training/experience should carry special probative or persuasive weight and the record as a whole should be evaluated on the witness' respective reasoning as it applied to and addressed the particulars and facts of this specific case, including their varying interpretations of the CX 8 medical literature, and their personal impression conveyed when testifying.

During Dr. Cayton's cross examination counsel for claimant indicated he had been given some articles by respondents' counsel, researched by respondents' counsel. He was told by respondents' counsel Dr. Cayton had reviewed the abstract of one given him, which claimant's counsel at that point moved for admission as an exhibit. Claimant's counsel believed this abstract was submitted to him either after the 6/99 proceedings or after Dr. Duhan's 8/2/99 testimony. CTX 64-71. CX 9, this abstract was marked for identification at CXT 65-71 where its admission was discussed and it was excluded at that point on respondents' objection, the ALJ indicating its admission would be taken under advisement. Dr. Cayton testified he could not remember but he may well have seen the CX 9 abstract, **An Updated Study of Mortality among Workers at a Petroleum Manufacturing Plant,** *Honda* Y. *Delzell E, Cole P.*, Journal of Occup. Environ. Med., 1995. After reading CX 9, Dr. Cayton was cross examined on it. Dr. Cayton testified the CX 9 study seemed to be saying that in one study of one petrochemical plant there was an increase in MDS. Claimant in Post Trial Brief urges this article supports claimant's position there was an excess of MDS in workers in petrochemical manufacturing plants, that petrochemicals hastened or caused MDS, and that under 20 CFR §702.338 it is the duty of and the ALJ should take CX 9 into consideration. By Post Trial Brief claimant requests he now be allowed to enter the article in its entirety into evidence. This article was secured by claimant after Dr. Cayton's recalled 1/26/2000 cross examination although he had known of it for some time. While claimant states Dr. Cayton did not explain why he did not come up with CX 9 in his literature search the fact is, neither Dr. Cayton nor Dr. Duhan came up with this article and Dr. Duhan testified to a very extensive literature search.

The procedural history of this matter reflects both the Pre Trial Order's requirements and how abstracts were first referred to without requested copies being supplied, then the abstracts were presented without the articles and only because of an unexpected development did a reopening opportunity arise to evidence articles not evidenced 6/15/99. The experts' substantive presentation indicates the drawbacks and medical interpretation problems in evidencing medical abstracts alone. The article could have been secured prior to cross examination as claimant was knowledgeable as to it, and further Dr. Duhan by his literature search had two full opportunities to secure it and refer to it. Moreover after review of the entire record including consideration of the experts' varying testimony on the methods, meaning and significance of the contents of complete medical articles it is the ALJ's opinion that an article, even more so an abstract, standing alone can result in confusion and lack of full or clear appreciation for medical meaning and nuances especially where the exposure product's substance and process is as complex as this record reflects. Under the procedural and substantive circumstances in this particular case, it does not appear this 20 CFR §702.338 discretionary admission action is appropriate to the circumstances, particularly not as to a document, the article, which claimant had full opportunity in the course of his case to present by his expert who elected to selectively limit his research consideration. While similar observation can be made as to the abstract, the ALJ is entering CX 9 into this record and has considered its contents in reaching a decision. It is however the respective experts' testimony, and how they impressed by content and demeanor, on the facts in this particular case, their explanations on the specific substances of RXs 49, 50, and what this record reflects as to their reasoning and the composition and process of these substances, the basis of the injurious occupational exposure claim here, which determine decision.

The RX 49 MSDS, OSHA required, states that low levels or infrequent exposures to residual distillates is unlikely to be associated with cancer or other serious diseases. Moreover there are, as reflected in summaries above, considerable fact finder reservations as to the specifics of Dr. Duhan's testimony and his statements which bear on the differences in the coke process, petroleum and coal and its various distillates. The summaries above set forth evaluation reservations at certain points, as to Dr. Duhan's representations as compared to Dr. Cayton's explanations, which bear on an ultimate non-persuasion finding. Moreover in weighing the evidence to find that Dr. Duhan is no more persuasive than Dr. Cayton on the determining issues, and that the claimant has not persuaded under **Greenwich,**

it is the specific contents of their testimony and opinions and these two expert witnesses' personal impression in contents and manner, as they bear on this worker's case which weigh on the non-persuasion decision as to Dr. Duhan's opinions/theories, considered with the contents of the medical articles on which Dr. Duhan relies. Three very limited small studies which do not necessarily apply to or bear on this worker's circumstances, and compared to the very large scale studies over time upon which Dr. Cayton relied, which Dr. Duhan did not address. Dr. Cayton well-handled cross examination, Dr. Duhan's experience and training was not expressly to the particular substances involved here, he relied heavily on a process claimant was not involved in and his manner of disclosing what he ostensibly relied on gave great credibility pause at times. While claimant argues Dr. Duhan's articles were more recent, their limited nature as against the large scale earlier studies on which Dr. Cayton relied does not give Dr. Duhan's articles special weight, particularly when weighed and measured against their contents, Dr. Duhan's testimony on them, and Dr. Cayton's testimony on them.[26] Dr. Duhan did not address or even read the breadth and findings of the pre 1981 large scales studies on which Dr. Cayton relied. It would appear that even if three more recent studies were to be the basis of an expert's opinions revising past medical knowledge, he would want to view these against or with consideration of past scientific knowledge without summarily dismissing earlier studies.

It is found that Dr. Cayton addressed all the particular claims made here as to Mr. Pierce's person including the diesel fumes exposure claim more recently made, he comprehensively addressed each of the injurious exposure claims well and persuasively reasoned from the evidence and his and Dr. Cayton's medical literature. He was specific in the bases as to why he did not believe it was medically probable that the claimant's MDS was caused, accelerated, aggravated, exacerbated or hastened by his 6/91 DSC exposure to petroleum coke and Bunker fuel oil of RX 50, 49, and in doing so used medical literature referable to these types of exposures based on large population studies. The length of Dr. Cayton's experience as a Board certified physician, his described experiences with toxic exposures and his expressed knowledge of the field relevant to the issues here indicated that he was 29 CFR §18.104 qualified to speak to the areas described and the issues involved in this matter. Dr. Cayton persuasively explained the limitations and narrow scope of the medical literature on which claimant's expert relied. And indicated as well, particularly in view of the few post 1980 articles claimant was able to cite to and their inherent limitations of small scale, their purpose and tentative, speculative nature that their recency as compared to the breadth of earlier large scale studies, the numerous medical textbook and medical articles' consideration, should not carry persuasive special weight. Many aspects of Dr. Cayton's testimony were more persuasive than those of Dr. Duhan as indicated in evaluative summaries above.

It is thus found and concluded under **Greenwich** that Dr. Duhan and claimant's evidence carries no more probative and persuasive weight than employer's and employer's expert on the issue of petroleum coke, Bunker Fuel Oil and diesel fumes exposure and its causation of his MDS.

It thus cannot be found on weighing all the evidence under **Greenwich** that the claimant's circulatory, blood, bone marrow condition MDS occurred in the course and scope of and arose out of his 6/91 DSC work. His occupation disease exposure claim for benefits based on his 6/91 work for DSC is denied.

Orthopedic Medical Opinion and Testimony with Preliminary Analysis and Evaluation

Dr. Fong

---

[26] Claimant cites to my colleague, Judge Mapes' statements in *Casey v. Georgetown University Medical Center*, 31 BRBS 527(ALJ), 31 BRBS 147 (BRB), where too few case studies were the basis of employer's *Casey* argument, both counsel in the *Casey* case the same counsel as here. However the facts were entirely different in *Casey*, and the nature of the case studies totally different.

Dr. Fong, an orthopedic surgeon, saw Claimant on November 12, 1998, at his attorney's request, and the doctor, after the usual social and employment history, his review of diagnostic tests and Claimant's medical records and the physical examination, reported his impression as:

1. Status post right total hip replacement for DJD (degenerative joint disease).

2. Status post left total knee replacement for DJD.

According to Dr. Fong, "Certainly if the patient carried the load on his right shoulder as well, which he indicated, or with both hands, he would be favoring his right leg more than his left. Over a period of many years, this same repetitive activity certainly could have accelerated an osteoarthritic process. Once the osteoarthritic process begins, progression will occur, although at different rates for different individuals. Exposure to continued heavy work activity certainly could lead to further acceleration of deterioration in the weightbearing joint that is already arthritic and symptomatic." (CX 4 at 27)

According to Dr. Fong, "there is a medical probability that the work activity that he described while working on the docks accelerated an osteoarthritic process of the right hip on the basis of repetitive trauma over many years... It appears that although there may be a basis for industrial causation from his work on the docks, there may also be a basis for apportionment due to his work activity following the cessation of work on the docks."

Dr. Fong opined that "the patient cannot return to his former work activities on the docks either as an able-bodied longshoreman or as a driver now because of two joint replacements in two weight bearing extremities." (CX 4 at 27-28)

It is found as a fact as related below that the work activities which claimant related to Dr. Fong, which were the foundation for Dr. Fong's expressed opinions, and particularly Dr. Fong's opinions that his right hip condition was due to work activity cargo loading and unloading in a specific way while pivoting on the right leg, and while carrying loads on his right shoulder or with both hands, are not the claimant's DSC work activities which are the subject of this cumulative trauma claim. Dr. Fong did not know and was not advised of the claimant's specific DSC exertional activities performed at any time or in 6/91.

Dr. Stark

On the other hand, the Employer relies on the March 5, 1997 report of Dr. James B. Stark (RX 22) wherein the doctor gave this assessment (**Id.** at 111):

1. Status post right total his arthroplasty - 12/5/94 - performed for osteoarthritis.

2. Left knee symptomatic patellofemoral joint pain.

Dr. James Stark examined the Claimant in January of 1997 at Employer's request, prior to his later knee surgery. After the usual social and employment history, his review of Claimant's past medical history and his medical records and the physical examination, Dr. Stark concluded that this is a "somewhat complicated case involving a seventy-three-year-old male who began working as a longshoreman in 1951," that "the need for the total hip arthroplasty occurred as a result of the natural progression of right hip degenerative arthritis subsequent to retirement from the longshore union" and that "the total hip arthroplasty would not, in and of itself, preclude performing the work activities of a

CAT operator," although "there might be some concern because of his safety climbing off and on the equipment." (EX 22 at 111-112) Dr. Stark in later testimony further explained a prophylactic recommendation claimant not be at heights, but he could operate other heavy equipment used in longshore activities without such a concern. The fact finder notes on review such as the longshore jobs his PMA records at EXs 24-25 indicated he performed in non-DSC work. Tr. 350. In report he opined Claimant's right hip osteoarthritis was not caused or significantly accelerated by his work activities as a longshoreman. Dr. Stark further opined in report "that future medical treatment for the right hip may be necessary including revision of the total hip arthroplasty." (**Id.**)

In reporting that it was more reasonable to conclude the need for the hip replacement resulted from the natural progression of degenerative arthritis Dr. Stark explained that if lifting, carrying and climbing were the cause, the condition would be bilateral, not one-sided as it was with Claimant. He also reported that clinical and radiographic progression of the right hip osteoarthritis occurred subsequent to Claimant's cessation of work on June 25, 1991 and his retirement from the union several months thereafter. (**Id.**) Dr. Stark in Discussion reported the claimant told him he did not retire due to his hip pain, which increased after he retired, and he pointed out in his 3/1997 Discussion that the claimant continued working as a "Cat" operator until he retired in l991, prior to his complaining of hip pain, which from the records Dr. Stark reviewed, dated to 3/92. Dr. Stark also reported the claimant indicated in 1997 he did a little farming, helped with maintenance of the machinery and on occasion drives a caterpillar.

In reviewing this report it is noted, and found, that Dr. Stark's 3/97 references to when claimant quite clearly developed symptomatic right hip arthritis, the late 1980s or early 1990s, that his statement "Mr. Pierce developed symptomatic right hip osteoarthritis in the late 1980s or early 1990s," are statements of Dr. Stark based solely on what the claimant told him in his history. Dr. Stark in report, after review of the treating records also referred to the need to have his pre 1992 records to review on the causation issue. Dr. Fong who evaluated for claimant also pointed out this problem on review of claimant's history statements against his treating records.

Dr. Stark also testified that based on the pain history the claimant gave him, he did not believe he was unable to work as a caterpillar operator at his retirement. Tr. 389-90. Dr. Stark stated in report it is clear that the hip worsened with work and non work related activities and with the natural progression of hip arthritis subsequent to 1991.(EX 22 at 113) Dr. Stark opined his post retirement work was more demanding than driving his DSC "Cat." While the claimant in his history to Dr. Stark related in but limited fashion his post 6/91 truck driving and mechanic work activities, Dr. Stark's treating evidence review indicated post 6/1991 activities in which he injured his left shoulder, fell from his truck in 1994 with right sided back and leg complaints, then injured his left knee on a truck bumper. On fact finder analysis, it was to these post 6/1991 work activities that Dr. Stark referred in his statements as to a progression of his right hip condition subsequent to 1991.

Dr. Stark testified that in his field as a Board Certified physical and rehabilitation medicine specialist he has been treating and evaluating all types of physical laborers for 20 years, and as part of a medical sports group he cares for the San Francisco Giants and the San Francisco Ballet. Based on post 6/91 observation visits of unstated length to the DSC Pittsburg coke petroleum facility Dr. Stark indicated he is familiar with the type of work Caterpillar operators do and he has in the course of his practice examined other such operators. Dr. Stark testified that the claimant's DSC Caterpillar work did not cause, aggravate or accelerate the claimant's right hip condition and this work did not cause him to need surgery any sooner than he would have if he had not done his DSC work. Dr. Stark's opinion, he testified, was based on the fact claimant was not performing activities at DSC which would be

injurious to his hip, he was not loading his hip excessively and he did not have any specific DSC right hip injuries.

Dr. Stark testified on his visits to DSC Pittsburg he saw no workers doing the pivoting activities claimant represented he did, and he saw no workers lifting or carrying. Tr. 349. Additionally Dr. Stark further explained in detail and based on his experience including with railroad workers who daily climb off and on rail cars, and his knowledge of the medical literature on the claimant's right hip condition, why he did not believe there is any data which even suggests climbing activities have an adverse effect upon the hips as opposed to their notorious damage to knees. Dr. Stark testified he specifically looked to medical literature on caterpillar operators and found no association between these activities and the development or aggravation of hip arthritis. Tr. 344-348. He reiterated his 3/97 opinion the unilateral nature of claimant's condition also indicated a lack of DSC Caterpillar causation. Dr. Stark's 3/97 opinion of lack of DSC and longshore work activities' causation was based on the claimant's injury claim as he then stated it to Dr. Stark: that his Tosco (DSC) work required "bending, lifting up to unspecified amounts, pushing, standing, climbing, etc." and that his claim was a "'class action' ...for carrying 100 lbs sacks over a period of 30-40 years causing undue stress and wear on the joints. However for the last ten years ... he did not do much heavy lifting." EX 22:1-2. These statements echo claimant's LS-203 claim's language at CX 6, with more specifics as to the stress and strain work activities, with more specific exertional activities described to Dr. Stark.

Dr. Stark learned of claimant's twelve foot ladder fall five years earlier not from claimant but his review of Dr. Murata's records. Claimant in history to Dr. Stark denied any hip or knee pain prior to the cumulative trauma claim, as claimant articulated his claim to Dr. Stark and on LS 203.

At trial, Dr. Stark considered the claimant's 6/15/99 testimonial additions as to climbing off and on the "Cat" six or seven times in four hours and based on his knowledge and expertise he testified he did not believe these represented activities would have caused, aggravated or accelerated his right hip condition.

Almost two years after Dr. Stark evaluated him claimant was then evaluated by Dr. Fong, an orthopedic surgeon, and he now gave Dr. Fong a history of having spun and pivoted on his right hip and knee tens of thousands of times since he started doing manual longshore work forty years ago, stacking the pallets. He told Dr. Fong of driving other equipment including CATs in the last ten years prior to his retirement, a retirement which he also told Dr. Fong did not result from any health problems, and he related that his hip and back pain started near the end of 1991. He did not advise Dr. Fong that he did any pivoting on his right leg in his DSC climbing despite the fact he told and discussed with Dr. Fong pivoting in other earlier non-DSC longshore employment. He also told Dr. Fong in later years, he sometimes did manual labor while driving equipment. He told Dr. Fong he thought his repetitive work activities over the years, particularly the loading and unloading of his earlier longshore years, contributed to the degenerative changes.

Dr. Fong was not advised by the claimant of his post 6/91 trucking business work activities but claimant did tell Dr. Fong the right hip surgery put a lot of stress on his left knee causing pain for which his knee was aspirated, cortisone shots given and a total knee replacement recommended. He also told Dr. Fong he was able to do anything he wanted to do after his hip and knee surgeries, and could climb up ladders if he wanted to do so. CX 5. The fact finder notes this conflicts with his trial testimony. Dr. Stark based on Dr. Fong's report which described heavy lifting and carrying sacks as a stevedore, as so described testified this was most definitely a possible causative factor in the claimant's right hip condition, and if he was carrying weight on his right shoulder and pivoting on his right leg it would more likely cause his right hip arthritis. However in overall fact finder evaluation of both the claimant's credibility and the causation issue, it is noted the claimant never gave Dr. Stark this history, and his

DSC work did not involve any carrying of weights. In this regard the fact finder also notes Dr. Fong knew of his post retirement trucking activities only from reading Dr. Stark's report in connection with Dr. Fong's medical records review, and only by reading the reviewed medical reports did Dr. Fong know claimant's 1995 left knee bumping preceded aspirations' need, claimant instead stating to Dr. Fong this condition resulted from his pre and post surgery right hip condition.

Dr. Fong's review of the extensive medical records submitted to him indicated the reviewed records dated almost entirely to the post 6/91 retirement period. The fact finder notes most he reviewed at CX 4 are reflected in Employer's Exhibits. The fact finder notes those pre 6/91 records reflected in Dr. Fong's report, and even the ones in 8/91, late 1991, early 1992, which mention some sort of arthritis, as Dr. Fong stated either do not mention the location of the arthritis or like others are illegible. Dr. Fong stated that the medical records he reviewed did not go back far enough in the patient's treatment course to demonstrate that he had any problems while he was working as a longshoreman. The fact finder notes, as did Dr. Fong, the limited notes referable to the chiropractor claimant said he went to, with "no notes whatsoever from Dr Lugi's office indicating whether or not the patient had hip or back problems in the late 80's/early 90's." Dr. Lugi is statedly the orthopedic surgeon he went to at that time. Although claimant failed to advise him of his left knee bumping incident and he learned about it only in reviewed treatment records, Dr. Fong opined there was a slight medical probability his repetitive longshore work activities lifting and carrying heavy loads aggravated or accelerated his left knee's osteoarthritis but he indicated it could not be reasonably accepted the knee bumping injury was related to his longshore work. As reflected in analysis above, Dr. Fong in making these statements did not have knowledge of the specifics of claimant's actual DSC work activities, or the exertions involved in such activities; he was basing this slight probability statement on described earlier Longshore Act activities with other stevedores. Dr. Fong's work demands understanding impresses as an amalgam of claimant's longshore activities over time.

While the claimant's knee is not the subject of this claim, assessment of his overall credibility is a factor in his unscheduled claims. Such an assessment is affected by what this claimant, who personally impressed at hearing as an intelligent, business-experienced individual, elected to tell and not to tell evaluating specialists, and how he variously described the basis of his orthopedic claim, these among some of the factors bearing on an overall credibility evaluation as it affects his orthopedic claim. Claimant's credibility is affected by these selective and inconsistent and contradictory representations..

Dr. Stark on cross examination pointed out the inconsistencies in claimant's various representations as to when his hip pain started and whether his hurting was a factor in his retirement, questions of fact he said. In so responding, Dr. Stark had reviewed claimant's medical records. Dr. Stark explained why, because of his age and autopsies on young men, he suspected the claimant had prior hip arthritis and if what claimant testified as to pain in his hip prior to retirement was taken as truth, the most likely cause would have been degenerative arthritis. Both Dr. Stark and Dr. Fong indicated based on x-rays there was a rapid progression in his right hip arthritis between 3/92 and 12/94, and Dr. Stark indicated that because the rapid progression was clinically and radiographically contemporaneous with and coincidental with his post retirement self employed trucking activities, he opined it more likely these activities contributed to his hip problem than the DSC activities which ceased in 6/91. And it is, he testified, more reasonable to conclude the hip replacement need was the result of the natural progression of his degenerative condition subsequent to his 6/91 retirement. Claimant's counsel's question indicated claimant had first sought treatment for his right hip arthritis in 1992, eight months after longshore retirement, in 2/94, Tr. 358-59.

Dr. Stark testified he has pretty good knowledge of what a caterpillar operator does when operating this machine and he volunteered that even within the same models there are controls which stick or require more force in manipulation. The use of foot controls in this operation and his post

retirement truck driving would load the hip; a sticking pedal difficult to operate would load the hip differently than a non-sticking pedal. Having so said, Dr. Stark by the content of and his in-person testimony persuasively explained why, if loading of claimant's hip were required because of sticky/problems with the controls, he believed it unlikely that this would be a possible source of claimant's hip worsening, and he indicated if the caterpillar operator's pedal was sticky or had to be pushed this would not affect his opinion such activities would not accelerate claimant's right hip condition. It might temporarily aggravate it while performing this activity but it would not cause a more rapid deterioration of the joint. Tr. 378.-382, 390-397. He explained loading the hip, to be a history of hip loading so as to cause, accelerate or contribute to the hastening of hip arthritis, including his hip surgery, the basis of Dr. Stark's responses as to cross examination questions which assumed such activities in his longshore work, would have to involve exertional activities carrying weights and activities beyond the body's day-to-day entire body weight. Which Dr. Stark testified was not what was involved in climbing on and off the "Cat" or pushing foot controls, as described. And while he indicated caterpillars vibrate like crazy, as far as Dr. Stark knows vibration is not incriminated in the medical literature on osteoarthritis, he did not believe any presumed vibrations caused, accelerated or aggravated claimant's hip condition. As the fact finder noted above in analysis of the claimant's description of what was strenuous about his DSC work, he did not testify to any foot control problems/sticky problems in working the Cat at DSC, at any time or in 6/91,

Dr. Stark on cross examination advised counsel of 18 specific medical literature abstracts on unilateral and bilateral hip arthritis he reviewed in connection with offering his expressed opinions. Claimant post trial argues these studies should carry no weight because Dr. Stark produced no comments from the studies which support his reasoning. However all Dr. Stark was asked for was an identification of the abstracts, and from Dr. Stark's well reasoned medically based opinions on the osteoarthritis here and the manner in which he handled and expressed himself and explained his opinions and their bases in person, there is no reason not to believe that the research Dr. Stark cited and brought to hearing are in accord with his representations and add weight to his opinions which impressed as objective overall and medically well-founded..

Dr. Stark explained that the timing of the occurrence of the rapid deterioration here, clincally and radiographically, is a factor in lack of causation consideration in the absence of any data which says truck driving caused the problem. Claimant in arguing that Dr. Stark's opinions are so contradictory and inconsistent, inherently incredible and patently unreasonable and cannot qualify as substantial evidence, or persuasive evidence uses Dr. Stark's cross examination testimony at Tr. 362-6 in conjunction with his report's statements. These are found to be mistaken interpretations as argued by counsel as to Dr. Stark well-explained cross examination responses. Responses where Dr. Stark explained he founded his opinions on the numerous factors of clinical, radiographic and contemporaneous time factors, the relationship of his post 6/91 activities to his complaints for which treatment was sought and recorded, the remoteness of his DSC work activities at retirement to his complaints. Founded as well in Dr. Stark's personal knowledge and appreciation for what caterpillar operations' work involves exertionally and knowledge of the DSC caterpillar operations albeit at a later period. Based also on Dr. Stark's knowledge of and expertise on what permanent aggravation or acceleration of an arthritic hip means in his opinion, verses pain on motion of an arthritic hip.

Further Evaluation Osteoarthritis Claim Conclusions of Law

The record reflects the following on the issue of §20 (a) invocation on Claimant's allegation that the established harm to his bodily frame, **i.e.**, his right hip osteoarthritis, resulted on a cumulative trauma basis from his physical exertions in operating the "Cat" tractor during the nine days prior to his June 25, 1991 retirement, as well as on his claim his many years of operating equipment at the Port of Pittsburg primarily, especially the "cat," aggravated, accelerated and exacerbated long-standing, mostly

asymptomatic right hip osteoarthritis. By the report of Dr. Juon-Kin K. Fong, dated November 19, 1998, (CX 4), claimant adduced some evidence tending to establish that Longshore Act working conditions including manual work and gangways walking, loading and unloading, even after he became a Cat driver may have provided some basis, as Dr. Fong opined, to say cumulative trauma led to his right hip problems.

Dr. Stark's report and opinion constitutes such evidence as a reasonable mind might accept as adequate to support a conclusion the claimant in his 6/91 DSC work did not suffer cumulative trauma contributing to, aggravating, exacerbating, or accelerating on any permanent basis or hastening his right hip's degenerative osteoarthritic condition and 12/94 hip replacement, and it is specific and comprehensive in his consideration of the facts in this worker's case and condition so as to rebut the §20(a) presumption. Further it is found and concluded on weighing the entire record that Dr. Stark's evidence is far more persuasive than Dr. Fong's report. Dr. Fong's opinions are so tentatively expressed and in opinion he comments on the voids and questions this worker's presentation raises on the causation issue including: the lack of any indication of a significant right hip osteoarthritic condition prior to his 6/91 retirement, and his treating evidence which reflects complaints based on subsequent work activities and a 1994 fall.

As reflected in summary above Dr. Stark comprehensively and specifically considered the nature of the claimant's Cat climbing work activities he now claims constituted cumulative trauma. He considered in his lack of causation opinion claimant's treating clinical and radiographic records, what evidence there was as to any pre 6/91 complaints and limitations and Dr. Stark well reasoned and explained on cross examination why he did not believe the DSC 6/91 work activities claimant described constituted a cumulative trauma which on any permanent basis affected the natural progression of his underlying right hip arthritis, or hastened his hip surgery. Dr. Start in person was most persuasive and he has the credentials in the field of which he speaks as described in testimony and CV EX 46, and he is Board certified. Dr. Fong's experience is unknown.

Moreover on this orthopedic claim claimant presents significant credibility problems. After not relating to Dr. Fong any pivoting involved in climbing the Cat, pivoting being the subject of Dr. Fong's evaluation interview, and it being difficult to understand why this would be omitted by claimant had it occurred as he related at hearing, his testimony as to ascending/descending the Cat 10-12 times daily in the four hours he worked for DSC in 6/91 did not strike as plausible to the work circumstances, when only four hours of pile pushing work on the Cat was required of the engaged longshoreman. While he lessened this number on cross, how he impressed on this revised representation on the stand, with the indication he would have to descend so often because he as an experienced Cat driver would position the Cat so poorly on the pile did ring true. His represented number of descents/ascents was contested by Ms. Kelsey's testimony, testimony more reasonable to the work circumstances.

Then the evidence belies his represented need for a smoke contributed to ten times up and down the Cat in four hours over his 36 hours of 6/91 DSC work. The treating evidence indicates the claimant has not smoked in 20 years. His represented need to descend for a smoke indicated that in this, and probably in his other representations as to why he would be on and off so often, the claimant's testimony was not candid and straightforward as it bears on daily times off and on in the limited hours of actual operation 6/91 at issue. Additionally he reflected no pivoting in his DSC work to Dr. Fong where work activities' pivoting was a topic of discussion, and he poorly or incorrectly described to Dr. Fong just what the exertional nature of his DSC work was. When he reflected, although he could ascend the Cat from right or left side, that he thought his hip arthritis was not bilateral because as a right handed individual he believed he climbed the Cat by using his right leg to pivot, this appeared a layman's representation on a medical condition's causation, including whether right hand dominant individuals are right leg dominant in activities in which both legs must be used, like climbing, and where

the piece of equipment can be climbed from left as well as right side. This seemed a led, self-serving representation with a litigation flavor.

Then claimant appears to be selective in what he represents to examiners including his conflicting statements to treating physicians as to when he first experienced right hip problems, his varying dating of when they increased in symptoms and intensity, his omission to some physicians of his ladder fall history and the 1994 truck fall onto his right hip side and back with symptoms for which he sought medical attention in the year of his later hip surgery; and his later omission in some reports that just prior to his need for 1995 knee aspiration he bunked his knee on a bumper while attributing these problems to his hip surgery's effects.

Then there is the impression claimant left when he testified as to his reasons for retiring in 6/91 at age 68 which bear on his credibility. He had worked steadily in his usual Longshore Act work pattern until his retirement and subsequent to his retirement he increased his time spent in his business enterprise, actively driving his truck or caterpillar as Dr. Stark understood, injuring himself in physically demanding trucking and repair work activiites as he reported to treating physicians. He has told examining specialists that he did not retire due to his physical condition, which conflicts with his testimony. On the § 10 involuntary retirement issue, his total presentation would not persuade he was an involuntary retiree 6/25/91 so that § 10 (d)(d)(A) would not apply in the event either or both of his unscheduled claims are found compensable. (See also depositions at EXs 42,43.)

While claimant argues that Dr. Stark's opinions are so contradictory and inconsistent they do not rise to the substantial evidence level, this is not the fact finder's view. The claimant's inconsistency/contradictory arguments are founded largely in the inconsistent and selective history and symptoms' statements claimant has given in his treating record and to evaluating physicians, including the inconsistent and conflicting dating of his right hip symptoms/their significance or intensity. The claimant's own inconsistent and contradictory statement as to symptoms with his post retirement trucking activities, symptoms and events reflected in his treating records, in large measure create and contribute to claimant's inconsistency/contradictions argument. Dr. Stark persuasively explained from the 1992 clinical and radiological evidence his reasoning as to why claimant's right hip arthritis was not affected in any compensable way by his DSC "Cat"work which ended in 6/91 and why he opined it was more likely than not it was the natural progression of his hip osteoarthritis condition which was not permanently affected by any symptoms he may have experienced in his DSC activities, about the presence of which there are significant credibility problems for the fact finder on review of the claimant's conflicting and inconsistent statements over time. Dr. Stark's report must be viewed carefully against claimant's arguments, Post Trial Brief 8:11-9:21 to fully appreciate it is the claimant's conflicting, inconsistent and selective statements to examining and evaluating physicians as to his hip symptoms and injury history, including to Dr. Stark and Dr. Fong, which provide the basis for claimant's argument. Including claimant's downplaying of the effect of his several falls.

Claimant's post trial argument faulting Dr. Stark for not indicating "the specific traumas could be a reason for the unilateral hip problem after being aggravated over and over again at work and finally by" his last days of DSC work, preceded by his argument's statements as to "specific injuries which are not documented in the file" as a basis for Dr. Stark missing consideration of a combination of the two in a causation opinion does not, first, specify which specific traumas he is referring to; and then does not consider that it is claimant's failure to advise his examining and evaluating physicians in a non selective, non contradictory, consistent and non confusing fashion just what he experienced over the years so that he could be found reliable and credible that contributes. Dr. Fong, his own evaluator, had problems with what claimant related to him when he reviewed them against claimant's medical records, as did Dr. Stark. Other aspects of claimant's argument attacking Dr. Stark's credibility strike, at Brief, pg 10:19-11:20, and particularly at 10:25-11:10, as a layman's medical opinion contesting Dr. Stark's medical

explanations and expertise. Further there is in claimant's statements to various physicians since his retirement indications that in his business operations he not only drove one of his trucks he exerted himself significantly physically in such operations resulting in injuries, and on this record it is in these post 6/91 work activities that he first contemporaneously represented to treating physicians that he was experiencing symptoms affecting his work abilities. His treating pre 6/91 records do not reflect such information, there are significant voids and questions raised by his presented treating records as to the presence of any significant right hip symptoms until the significant 1994 clinical and radiographic deterioration, as his own evaluating specialist noted, and the claimant is not credible. To fault specialists who are dependent on a patient's veracity for expressed opinions for the problems arising from the patient's contradictory, inconsistent, confusing and selective representations does not erode the persuasive value of the specialist's best judgment and opinion on what is presented to him.

Dr. Fong's opinions are of little weight on DSC work causation, aggravation, acceleration exacerbation or hastening of his right hip osteoarthritic condition as they were based on physical activities which claimant related to him which he did not perform in 6/91. While he may have performed what he related to Dr. Fong in earlier Longshore Act work, he did not perform it with DSC in his nine work days, 36 hours in 6/91 or probably at any prior time.

Claimant had full opportunity to evidence his orthopedic claim. Based on Dr. Stark's specific and comprehensive opinions, well reasoned on the medical documentation on which he relied, and given the significant problem with the claimant's credibility in his reflection of the activities he performed at DSC in 6/91 which he claims contributed to or hastened his right hip osteoarthritic hip condition and 12/94 surgery, and weighing all the evidence the claimant has not persuaded under **Greenwich** by probative evidence that this condition occurred in the course and scope of and arose out of his 6/91 DSC work. He has not under **Greenwich** persuaded his DSC work on any permanent basis aggravated, accelerated, exacerbated, contributed to or combined with his underlying osteoarthritis condition on any cumulative trauma basis so as to result in his post retirement condition and surgery and to be compensable under this Act, and it is more likely than not from the evidence that post retirement injuries were the contributing, combining and aggravating factor. It is so found and concluded. Thus the claim for benefits based on a cumulative trauma in DSC employ the last nine days of his 6/91 work is denied.

Other Issues including Statute of Limitations Issues

The following statements are made on some of the issues raised in this matter which are moot given the causality findings above and denial decisions reached. In the interests of judicial efficiency and since review of the evidence to decide the above issues involved review and consideration of evidence/factors which bear on some of the issues below these observations are made. Not all issues were briefed by the parties but some were.

As indicated above, on the § 10 involuntary retirement issue, from his presentation on the facts he would not persuade he was an involuntary retiree 6/25/91 so that § 10 (d)(d)(A) would not apply in the event either or both of his unscheduled claims are found compensable.

Since the first possible date claimant could have known he had a work related disability from his MDS condition was when the condition came to light in connection with his 12/94 hospitalization and its diagnosis, and notice was given by his 6/6/96 claim within the two year applicable §12 time limit, were his MDS claim compensable it would be found §12 notice was timely given.

On the hip claim and Employer's §13 defense: Claimant's contends his hip claim was timely filed because until Dr. Fong's 11/19/98 report he never had knowledge of a cumulative injury as he did

not know what a cumulative injury claim was until he spoke with legal counsel, and until such time as Dr. Fong pronounced his hip a result of his work he could not have known he had a worker's compensation claim. And further, employer has not evidenced that any doctor prior to Dr. Fong told him he had a cumulative trauma to his hip, or that it could be the result of work, and he unknowingly retired without referring to his hip although it was bothering him.

First, the claimant's testimony that any right hip problems played any part in his 6/91 retirement decision, or that he had any right hip symptoms affecting his 6/91 work abilities and earnings is not persuasive due to the manner in which he presented, and treatment evidence which does not indicate such or is unclear, as Drs. Fong and Stark's evidence review comments indicate. Further Claimant's lack of knowledge or awareness argument until Dr. Fong's report, a report to his counsel over two years after he filed his claim of right hip injury due to DSC stress and strain, is not persuasive. These filing facts persuade that as of no later than 6/6/96 this claimant knew, or had reason to know that he had a cumulative trauma claim, which he was then pursuing. The question of any earlier date for considering the employer's §13 defense which has not been briefed is moot given the lack of causation holding.

On the hearing loss claim as noted above, Claimant suffers from an agreed work-related hearing loss in the amount of 2.5% binaural, entitling him to an award of 5 weeks of permanent partial disability benefits, at the weekly rate of $682.14, or a total of $3,410.70, For this amount the stipulations and record reflects that Diablo Services Corp. is the last responsible employer. On 4/20/99 DSC paid the claimant this $3,410.70. RXs 10,11. On 12/10/98 DSC by counsel letter at RXs 44, 45 offered to settle the hearing loss claim for $9,000 inclusive of fees and costs.

On this claim the record indicates Dr. Barry C. Barron, an otolaryngologist, reported June 13, 1996 (EX 20 at 75) that Claimant's hearing loss had progressively worsened in the prior four to five years and that such loss is reflected in his serial audiograms since "his first audiogram four to five years ago in Stockton." (**Id.**) Dr. Barron evaluated at claimant's request and stated he would consider the claimant a borderline candidate for hearing aids at that time, and he should be reevaluated for such in a year's time. Dr. Steven T. Kmucha, also an otolaryngologist who evaluated for emlpoyer, took a similar history report but did not reflect any needed hearing aids treatment or follow up. Dr. Baron apportions 70% of the hearing loss to his maritime employment and the remainder to other factors such as presbycusis, his years as a truck driver and recreational noise exposure. (RX 20, RX 19 at 78)

Claimant is also entitled to an award of future medical benefits for his binaural hearing loss, including hearing aids if such should ultimately be medically indicated for him and all of these benefits shall be subject to the provisions of Section 7 of the Act. To this employer now agrees. As of Pre-Trial Statement according to claimant who on this basis seeks an attorney fee on the hearing loss claim. On Post Trial Brief employer, under §28(b) and Armor v. Maryland Shipbuilding and Dry Dock Co., 19 BRBS 119, urges no successful prosecution beyond what employer volunteered to pay. But employer did not volunteer to pay medical expenses on the hearing loss claim. Thus the raised attorney fee issue.

Attorney's Fee

Employer in Post Trial Brief agrees Claimant's attorney, having successfully prosecuted his hearing loss claim, is entitled to a fee to be assessed against the Employer or Carrier (Respondents), but only for services prior to its December 10, 1998 offer. On the attorney fee question here, the parties are advised only those legal services rendered and costs incurred on the hearing loss claim after November 24, 1998, referral for formal hearing will be considered by this Office. Services performed prior to that date should be submitted to the District Director for her consideration. The parties are strongly urged to settle and resolve this matter. If they are unable to resolve it, and believe submission here is appropriate, claimant shall submit a fully supported and fully itemized fee application only for the

period for which this Office has jurisdiction, sending a copy thereof to the Employer's counsel who shall then have fourteen (14) days to comment thereon. A certificate of service shall be affixed to the fee petition and the postmark shall determine the timeliness of any filing.

ORDER

Based upon the foregoing Findings of Fact, Conclusions of Law and upon the entire record, the following compensation order is issued. It is therefore **ORDERED** that:

l. Claimant's 6/6/96 claim for benefits under this Act based on occupational disease exposure injuries in his 6/15/91 through 6/25/91 employment with Diablo Services Corporation is Denied.

2. Claimant's 6/6/96 claim for benefits under this Act based on a cumulative trauma right hip orthopedic injury in his Diablo Services Corporation 6/15/91 through 6/25/91 employment is Denied.

3. Claimant is also entitled to an award of permanent partial disability benefits for his 2.5% binaural hearing loss based on his $682.14 compensation rate at injury, payable by Diablo Services Corporation with 28 U.S.C. §1961 interest payable from date due to date paid with Diablo Services Corporation entitled to a credit against such for any payments made.

4.. The Employer shall furnish such reasonable, appropriate and necessary medical care and treatment as the Claimant's work-related hearing loss injury referenced herein may require.

_____
ELLIN M. O'SHEA
Administrative Law Judge

San Francisco, California